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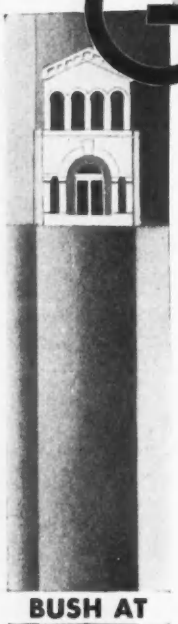

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VOLUME XXXVIII MARCH, 1933 No. 3

THE PRIVATE PRACTITIONER AND THE HEALTH DEPARTMENT*

By CARL R. HOWSON, M. D.
Los Angeles

DISCUSSION *by John C. Ruddock, M. D., Los Angeles; H. M. Bracken, M.D., Claremont; John H. Graves, M.D., San Francisco.*

IN any consideration of the economics of medical practice the problems resultant upon the growth of preventive medicine and of the social conscience cannot be ignored. These group themselves under three main heads: (1) control of communicable disease; (2) prevention of disease; and (3) care of the sick who are indigent or near indigent. The problem of the care of those who are able to pay low fees, or even in some cases full fees, obtrudes itself to some degree, especially in connection with certain activities of health departments and health centers.

SIGNIFICANCE OF DISEASE PREVENTION EFFORTS

The movement aimed at prevention of all disease is a logical outgrowth of the effort to *prevent* communicable disease, which in turn developed from the attempt to *control* communicable disease. Control is obviously a problem having to do with the public en masse, and is primarily the problem of the public health department. Prevention involves many matters which can be handled only by the public health department, such as inspection of water supplies, of food supplies, of methods of sewage and garbage disposal, of quarantine, etc. It has to do with the public as a whole, and cannot be handled as it affects individuals. However much credit belongs to the medical profession for demonstrating the necessity and efficiency of these measures, there can be no question of conflict with the individual medical practitioner in their enforcement.

PREVENTION OF COMMUNICABLE DISEASES

Science has made available additional means for the prevention of communicable diseases, perhaps the most notable being immunization against smallpox and diphtheria. Smallpox is now, thanks to the general use of vaccine along with improved sanitation and the quarantine of all cases, largely a disease of the past. Immunization against diphtheria is of much more recent origin, but a great decline in incidence has taken place within the past generation. The demonstration of the contagiousness of tuberculosis gave a tremendous impetus to attempts not only to cure but prevent it, and in 1904 led to the founding of the National Association for the Study and Prevention of Tuberculosis. The aggressive attacks on the disease from numerous angles have been productive of greater results than many of the most optimistic members of that organization even hoped for. The great increase in the degenerative diseases as a cause of death has more recently focused attention upon them, and increasing effort is being expended to prevent the development of these noncommunicable diseases.

FIELDS OF PRIVATE AND PUBLIC PRACTICE

The treatment of disease was formerly the field of the private practitioner exclusively, with the exception of the provision made by the state or community for the care of those financially unable to meet the problems of illness, as a result of which we have today in all large centers the development of great institutions for the indigent sick. In practically every case skilled medical care is being provided by the private practitioner "without money and without price."

As the public health administrator has viewed the vast and constantly expanding horizon of preventive medicine, he has enthusiastically enlarged the facilities of his departments to include a greater and greater field of activity. This has given rise to a situation without precedent, and the time has come when it is necessary to take stock; to ask ourselves whether the expansion is justified from the standpoint of the general public and the medical profession as a whole.

There is a legitimate field of activity for both the health department and the private practitioner, but when we attempt to delimit these fields we at once find ourselves dealing with a situation of great complexity. There has been presented to this convention a carefully thought-out report on this subject which cannot fail to meet with the approval of all thoughtful members.

In the presence of a smallpox epidemic we would be the last to question the propriety of the

* Read before the second general meeting at the sixty-first annual session of the California Medical Association, Pasadena, May 2-5, 1932.

health department doing all in its power to secure immunization of the entire public in the shortest possible time, irrespective of economic status. At other times the private physician should see to it that his clientele are adequately protected. The more conscientiously this is done the less the danger of an epidemic, and the less work there will be for the health department should an epidemic occur.

Large epidemics of diphtheria rarely occur now, and those of us whose practice does not include a large proportion of children come into contact with the disease so seldom that we are prone to minimize its importance. Its still high mortality rate and the fact that it is always with us should prompt a greater utilization of our opportunity to immunize the children of our patients. The occurrence of small outbreaks in the schools means necessarily the immediate immunization of fairly large groups of children. This is usually done by the health department as an emergency measure, again irrespective of economic status. Its necessity is in inverse proportion to the thoroughness with which the private practitioner has attended to it in advance.

HEALTH CENTERS

For the purpose of centralizing and increasing the efficiency of the health department activities, we have seen during the past decade the development of health centers. A health center has been defined as "an organization which provides, promotes and coördinates medical service and related social service for a specified district."[1] This is an all-inclusive definition, but for the purposes of this paper the statement concerning the aims of the organization of the Alameda County Health Center is more to the point: "to increase the efficiency of public health, relief, and welfare work in Alameda; to eliminate, by consolidation and coöperation, duplications of effort; to maintain clinics and furnish medical treatment and advice for persons unable to pay; to disseminate knowledge of, and to educate the public in, preventive medicine; to coöperate with the Health Department of Alameda, the Public Health Center of Alameda County, and other institutions and agencies of like character."

In the counties of Alameda, San Joaquin, and Los Angeles the centers have reached a high degree of development; there are nine in Los Angeles County and some twenty smaller centers in rented quarters; this county's centers have been maintained with medical staffs in part salaried and in part volunteer; they have served in regard to communicable disease control and the various welfare and educational activities, and have also rendered diagnostic and therapeutic services to the indigent and semi-indigent. Noteworthy development has taken place in several other states, particularly New York, Massachusetts, Connecticut, Ohio, and Iowa.

Time will not permit of a detailed study of the various health center plans and their functioning, and the advantages and disadvantages of the different types. Many committees have devoted much time and thought to this problem, and in the present fluid state of society and of the problems connected with illness, dogmatism is dangerous.

PART OF MEDICAL PROFESSION IN PUBLIC HEALTH PROGRAMS

But it is evident that the private practitioner should play a much more important part in all public health programs than in the past. As private practitioners we have recognized the great advance in public health and preventive medicine, but have tended to leave that type of work largely or entirely to specialists, with the result that frequently the specialists have developed it without our active assistance. This has not been to the best interests of either. The health administrators have felt that the general profession did not appreciate their efforts; and, as the need and opportunity for their work have increased wherever preventive medicine has opened new vistas, there has been a tendency to impatience with the conservatism and lack of interest manifested by the private practitioner. Lacking the stabilizing influence of his coöperation, some ambitious health projects, highly laudable in themselves, have been launched, when a more careful consideration of all the social elements involved and closer coördination with the medical profession as a whole would have suggested much less radical and expensive programs. These would, in the long run, have been at least as productive of results, and much friction and turmoil would have been avoided, to say nothing of the burden placed upon the taxpayer by the construction and equipping of buildings far in advance of the needs of the community. The general profession has felt that in some cases the health department activities have tended to encroach steadily upon the field of private practice and to lead strongly in the direction of state medicine.

TAXPAYERS SHOULD ALSO BE CONSIDERED

The present depression has brought home to us the fact that the almost unlimited expenditures of the past few years on our charitable and semicharitable institutions were based on a false premise. "The best is none too good" for our unfortunate improvident citizens may be beautiful sentiment, but "as good as is reasonable under the circumstances" would appear to be more practical. It seems probable that the tax-paying public and those having control of the taxpayers' money will be governed more by this latter idea in the near future. Health centers represent a very considerable capital outlay and a heavy maintenance cost. They should be built only after a careful study of the needs of the people to be served and the approval of the medical society.

HEALTH CENTER ACTIVITIES

Health-center activities may be divided into two classes: those belonging strictly to the public health department, and those having to do with the indigent sick of the community. Under the former head would be classed inspection services connected with food supplies, water, sanitation, quarantine, vital statistics, health education, etc.; under

[1] Davis, Michael M.: Clinics, Hospitals, and Health Centers, Harper's, 1927.

the latter the general medical and surgical clinic with subdivisions for the specialties. Prenatal and well-baby clinics probably have a place under the health department, but any individual requiring treatment should be referred to the private physician, or, if indigent, to the other clinic. Diagnostic and therapeutic services are for those who cannot compensate the physician for such work. There is no justification for the use of public funds to supply such services to those able to pay. Tuberculosis and venereal clinics entail special problems, but probably belong in the clinical department.

"In all free health centers there should be a well-conducted social service department, first, to guarantee to the public, to the physicians, and to those who supply the money and the service that only applicants who are unable to pay for private service are admitted; second, after a patient is admitted, to see that the recommendations made by the doctor are followed out as thoroughly and expeditiously as possible, so that the greatest benefit will be secured from his services."[2] It is obvious that the relationship between the clinic and the medical profession hinges largely on the efficiency of the social service department; for, unless there be adequate studies of all applicants, abuses will inevitably creep in and lead to friction.

The clinical department should be composed of members of the local medical association. They should form a staff organization to manage it. Where a number of health centers or clinics exist under one health or charities department, there should be a central organization of the volunteer staffs of such clinics, and within it a central governing committee. We are strongly of the opinion that there should be active supervision and coöperation on the part of the local medical society; it is imperative where the centers cover any large part of a county, in which case the county medical association should be vitally interested. The volunteer staffs and the local or county medical association should be represented on the supervising body if the clinics are to function to their highest efficiency in coöperation with the department of county charities, the county hospital, the county health department, and the medical profession.

The health-center laboratory and diagnostic facilities could be of increased service to the community if they were made available to the local physicians for such of their patients as require work of this type but are unable to pay anything approximating the regular fees. The same use might be made of some of the expensive physiotherapeutic appliances already installed.

LIMITATIONS IN PUBLIC HEALTH WORK

The extension of public health activities to include all the possible range of effort in the field of preventive medicine is stimulating to contemplate in the abstract, but might well be a nightmare to the taxpayer if considered as an immediately legitimate undertaking. The periodic health examination of all the citizens of the community would be a most praiseworthy procedure, undoubtedly productive of appreciable improvement in the health of the community; but not even the members of the medical profession are as yet sufficiently impressed with its possibilities to have attempted it as a practicable procedure for themselves, to say nothing of their patients. Its more enthusiastic advocates, both medical and nonmedical, are prone to lose sight of the fact that our knowledge of the beginnings of most of the diseases against which public effort is aimed is still far from complete, and that utilization of what little knowledge we possess for the detection of these diseases in their incipiency is one of the most difficult technical procedures in medicine, calling for the highest degree of skill and the outlay of a very considerable amount in money for each patient. When done in a routine manner it is apt to mislead and give rise to a sense of security which rests on a very uncertain foundation. The ultimate result would, I fear, be a reaction to the discredit of the medical profession.

That all who are not in good health, rich and poor alike, should have a complete examination and diagnostic study when they present themselves to the doctor or to the clinic, is a praiseworthy ideal. But the cost of such service, undertaken by the community, would be prohibitive, and the service would in no way be commensurate with the expense.

POSSIBILITIES

In all communities, large and small, the private practitioners should be thoroughly familiar with all public health measures and activities. The health department owes a duty to the medical profession second only to that which it owes the general public. It is its opportunity and should be its privilege to educate the general profession in public health measures to the end that every physician's office may be a health center. "Fundamentally the problem is one of preparing the public for the service which may be rendered by the physician and at the same time preparing the physician to give the type of service to which the public is entitled."[3] This would entail much work and considerable expense, but the results would amply justify the cost.

The recent experience of Geib and Vaughan in Detroit in connection with diphtheria immunization has demonstrated this beautifully. It is true that the cost was considerably in excess of what it would have been had the health department handled it in the usual manner, but a much higher percentage of the susceptible population was immunized than would have been possible had that been done. It was the conviction of the health department also that the additional expense was amply justified as a public health educational measure. A step in the same direction has recently been made by the Los Angeles County Medical Association with the coöperation of the various health officers in the county.

The measure of the success and efficiency of a health officer should be, not the territory covered

[2] Report on Health Centers of Alameda County.

[3] Geib and Vaughan: The Physician as Health Worker, Jour. A. M. A., Vol. xcvii, No. 6, p. 366.

or the number of employees or health centers in his department, but the extent to which he has merited the confidence of and popularized health measures with the general medical profession, because this will in turn be an index of the thoroughness with which health education has reached and permeated the rank and file of the general public. It is not to be doubted that the contacts of the medical profession as a whole far exceed those of the health department. An attitude of mutual coöperation and helpfulness on the part of the health department and the private practitioner will result in increased efficiency and much more general adoption of public health measures, and will enable the practitioner to serve his patients better and to increase the scope of his activities.

Our American system of government is based on the theory that the safest and best plan is to have the people do as much for themselves as possible. This may entail more initial expense than would centralized governmental action, but it is cheaper in the long run.

CHARITY HOSPITALS AND CLINICS

Reference has been made to the services rendered without compensation by the private practitioners in the care of the indigent in community hospitals. It is true that the physician derives valuable experience from the work he does at these institutions. It is equally true that in no other business or profession does the individual donate his services simply for the experience he gains, however valuable that may be. It has been charged that physicians take positions on the staff of these hospitals because of the practice they get indirectly through the patients there. As a faithful and regular worker in our own county hospital for well over a decade, I have yet to see sufficient benefit of this type to pay the automobile expense incidental to service there. I can call to mind several items on the wrong side of the ledger in connection wtih such patients. My experience in this is the same as that of practically all members of the attending staff of that institution.

Charitable clinics without number abound in our State, particularly in the southland, in many cases filling a definite need, in others serving only as an outlet for the energies and philanthropic dispositions of worthy but not always well advised citizens. Frequently the efforts of deserving institutions are duplicated, in consequence of which they are forced to labor under a heavy handicap. Such duplication inevitably results in inefficiency and excessive costs of administration. Irrespective of the need for the clinic and the amount of money expended on it, free service is expected and often demanded of the physicians of the community. It is seldom, indeed, that they are permitted a voice in determining the policies of the clinic. As your Committee on Hospitals, Clinics, and Dispensaries reported last night, there is need for legal measures which will place all such groups under the control of a central organization, probably the health department, which would set up standards such as have been approved by this association, and see that they were lived up to.

Apart from the general idea held by the public that the doctor makes his money easily and in large amounts, and the tradition among the members of the profession that ours is primarily a humanitarian vocation, there is no reason why the community should expect us to render gratuitously professional services worth in the aggregate, throughout the State, millions of dollars a year. Do the administrative or political powers think any more of us for it?

The organizations served by the Community Chest, which are the reason for its coming into being, exist by virtue of the physicians' gratuitous services. I venture the opinion that these services to charitable institutions are comparable in value to the contributions made by all other groups of citizens combined. In the annual Chest budget, do we receive credit for their value? Is the doctor consulted in regard to policies? Is his opinion asked or considered relative to the standing of the various organizations and their merits? We are perhaps not wholly free of blame for our present situation, but the fact remains that we are going to be "less than the dust" until we assert ourselves.

IN CONCLUSION

We do not know what lies ahead of us. We have had an intimation of the character of the final recommendation of the Committee on the Costs of Medical Care. We hear rumors of radical political action. Whatever eventuates, we must be prepared to see to it that nothing is done, under the guise of benevolent paternalism, which will throttle medical initiative and progress, with resultant deterioration in the quality of service received by the people. We must also see to it that if provision be made by the state for the extension of medical and hospital care for its citizens, cognizance be taken of the services rendered by the physician in hospital, health center, and clinic, at present uncompensated, and that nothing be done to limit the patient's freedom of choice in the selection of his physician.

307 West Eighth Street.

DISCUSSION

JOHN C. RUDDOCK, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Howson's paper comes at a time when the medical profession is awakening to a realization that there are certain encroachments which have come insidiously, and which may, unless curbed or regulated, destroy a relationship between the doctor and his patient, which has always been an individual one.

Doctor Howson's paper has taken up merely one phase of the problem of this metamorphosis that is occurring—that phase dealing with public health. The medical profession itself is responsible for public health and, as has been so well brought out by the speaker, there has been a gradual usurping and overlapping between the scope of practice of the health officer and the private practitioner because of the enlargement of the health departments in those communities which are more thickly populated.

In the beginning, when by means of organized effort it was proved that the incidence and mortality rate of certain diseases could be lowered, the health department was the answer, introduced by the medical profession in order to educate the public, improve the hygiene of the community, quarantine communicable diseases, encourage vaccination and immunization, and

keep certain vital records; and through this means decrease disease in the community and safeguard the public.

There have been from time to time many added detailed duties which various health departments have usurped and which often may have a public health factor in a very broad sense. Some of these are not real public health issues, but social problems and maladjustments.

To strictly draw a line of demarcation between the practice of medicine by a governmental agency, as represented in this instance by the public health departments, and private practice is almost impossible. The indigent, we all agree, are a problem that faces the community as a whole; but if Mr. X, who is not an indigent, has a mitral stenosis it is a problem that belongs strictly to Mr. X, and does not concern the community as a whole. The treatment of disease in those classes that are nonindigent rightfully belongs to and is the business of the patient and his doctor.

❋

H. M. Bracken, M. D. (Retired State Health Officer, Minnesota, 1897-1919, Claremont).—This is a timely paper. One important question is, should a health center care for the indigent sick? I think not. It is a dangerous procedure to combine under the same roof health problems and clinical problems. The diagnostic and therapeutic services for the indigent should be carried out under hospital supervision through the outdoor department or the hospital itself, rather than under the health department. A health center should give its attention to the prevention of disease, not to its treatment.

The health center does not need a social service department. The hospital does; and for a dual purpose. First, to see that only the indigent are cared for at public expense. Second, to see that those who need follow up treatment report for such as directed. This latter applies especially to the treatment of venereal diseases.

There may be districts in which there are no hospitals where the ambulant indigents can be cared for. Under such conditions it may be necessary to have an "outdoor department" for the sick at a health center. It is unusual, however, to find a health center in a district where a hospital is not easily accessible. If an outdoor department is to be operated as a health center it should be as a distinct unit under a group of trained medical men, including the specialists. The county medical society should be thoroughly interested in the make-up of this staff. The health activities at such a center should be carried on by a staff of thoroughly trained health agents.

❋

John H. Graves, M. D. (977 Valencia Street, San Francisco).—Doctor Howson's paper indicates a thorough knowledge of the subject and makes it possible for him to deal with the various phases of the problem with entire fairness.

There is a legitimate field of activity for the health officers of federal, state, and local health departments, and the splendid results of their work must be obvious to the most casual observer. It is unfortunate that in certain instances the bureaucratic spirit is evidenced by a tendency to transgress on territory and engage in activities which clearly belong to curative medicine. Speaking for the State Department of Public Health, the controlling board of which is composed of officers and members of this Association, it is almost unnecessary to say that the State Department of Public Health is distinctly against the invasion of the legitimate field of the practicing physician by the health officers under its control.

It is true that the line which divides the fields of public health activity and the physician's practice is, in places, ill-defined and scarcely perceptible. It is, and will be, the policy of the State Board of Health to make this dividing line as clear and distinct as possible.

It is the Board's purpose to secure friendly and harmonious coöperation of all the forces and agencies interested in the prevention and cure of disease so that a more efficient service will be rendered. The physicians must accept the responsibility for, and make a practice of, immunization of children under school age. Some of the heaviest onslaughts of diphtheria occur before the age of six or seven years, and the State Board is developing a program with the physicians of the State, through the county societies, by which the family physician will, at a proper time, send a card of notification to the parents that the child should be immunized. The Board believes that the great majority of parents will heed this advice and that the physicians are perfectly willing to perform the immunization on the same basis that they render other professional service to their patients. We hope to furnish duplicate cards which will be forwarded the health department and will give statistical evidence of the number of children who have been immunized. These figures, compared with the birth statistics, will give an excellent estimate of the number who have not been immunized.

Intelligent effort along similar lines will unquestionably greatly increase protection to childhood, lessen the work of the health officer, and add to the practice of the physician.

An intelligent appreciation of the problem on the part of all, a little more of harmonious coöperation, and a little less of caustic comment, will unquestionably go far toward solving the problem.

PERINEPHRITIS—SUPPURATIVE AND NONSUPPURATIVE*

By Charles Pierre Mathé, M. D.
San Francisco

Discussion *by George F. Schenck, M. D., Los Angeles; Robert V. Day, M. D., Los Angeles; Frank Hinman, M. D., San Francisco.*

INFECTION of the perinephritic tissues is of great interest to all studying kidney diseases because of extreme difficulty in diagnosis resulting from meager clinical signs, obscure symptoms, and lack of urinary disturbances. Perinephritis is a term applied to inflammation of the cellulo-adipose tissue surrounding the kidney and includes the renal capsule. In Germany the term "perinephritis" is limited to inflammatory processes of the kidney capsule, and the name "paranephritis" is applied to those involving the perirenal fat. These distinguishing terms, however, have not been generally adopted. The type of acute perinephritis which is secondary to inflammatory conditions of the kidney, such as nephritis, cortical abscess formation, tuberculosis, nephrolithiasis, etc., is often unrecognized on account of being overshadowed by the pathological findings presented by the kidney itself. Likewise, primary perinephritis is unrecognized because the adjacent healthy kidney causes no symptoms and fails to reveal any pathologic findings in making a urological examination. Primary and secondary suppurative conditions of the perirenal tissues, commonly known as perinephritic abscess, also present a difficult problem of differential diagnosis; yet treatment of these conditions, in order to be efficacious, must be instituted early. In making routine autopsies, I have been impressed by the frequency of perinephritis which had, in many instances, entirely escaped the attention of the attending physician. In the course of making surgical inter-

* From the department of urology, Saint Mary's Hospital and Southern Pacific Hospital.

* Read before the Urology Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

ventions on the kidney, I have observed inflammation of the perirenal tissues in all stages of development, viz., suppuration, resolution, and cicatrization. In some instances these inflammatory processes were entirely unsuspected; in others, they had been recognized by their signs and symptoms. These observations prompted me to make a study of perirenal infection, correlating their signs and symptoms for the purpose of classifying, clarifying, and facilitating their recognition in the future.

HISTORICAL NOTE

As early as 460 B. C., Hippocrates, in chronicling his daring operations on the kidney, described perinephritic abscess and advised "as soon as a swelling has appeared in the region of the kidney, one should incise it down to the kidney." Yet thorough understanding of suppurative and nonsuppurative perinephritis is of quite recent date. Isolated observations were made by Chopart and Civiale in the early part of the nineteenth century; but it remained for Rayer, who in 1839 made a thorough study, to give us a rational classification of these infections, dividing them into primary and secondary groups. A little later Trousseau made a most excellent contribution on perinephritic abscess; since then others have added very little to his classical description of the pathogenesis of this condition. Later Nieden, Rochet, Gibney, Hartmann, Kuster, Albarrán, Jordan, Legueu, Guiteras, Braasch, Hunt, Peacock, Brunn, and Rhodes added important observations. The principal pioneers in blazing the way of surgical relief of painful perinephritis were Le Dentu, Israel, Rovsing, Edebohls, and Pousson. The works of Edebohls and Pousson on the surgery of nephritis were epoch-making. Later contributions by Von Lichtenberg, Kolischer, and O'Connor on nephrolysis have done much to emphasize the importance of surgical intervention in indicated cases.

ETIOLOGY

The classification of suppurative and nonsuppurative perinephritis is made in the following table. Limitation of space will not permit me to discuss its etiology and portal of entry in greater detail in this article. The etiology of perinephritis, characterized by fibrosis, which has been recognized very recently, is obscure; yet, in spite of this obscurity, the etiology of perinephritis is of great importance because of the great suffering associated with it, which has been often attributed to other lesions of the kidney and referred to as nephralgia. Most of the older writers, *i. e.*, Israel, Guiteras, Lott, etc., were of the opinion that perirenal inflammation was usually secondary to kidney lesions, being transmitted by the blood or lymph stream or by direct invasion. But the more recent work of Doberauer, Rehn, and others has shown that infection of the renal cortex and perirenal fat might occur independently. Infection of the perirenal fat alone occurs when selective organisms lodge in the end arteries of the network made up by the capsular branches of the renal, suprarenal, spermatic or ovarian, lumbar, colic, and superior and inferior mesenteric arteries.

CLASSIFICATION OF SUPPURATIVE AND NONSUPPURATIVE PERINEPHRITIS

I. Nonsuppurative perinephritis.
   1. Fibrosis of kidney capsule.
   2. Sclerosis of perirenal fat.
   3. Hypertrophy of perirenal fat (lipoma).
   4. Fibrolipomatosis of cellulo-adipose perirenal tissues.

   A. ***Primary.***
      a. Hematogenous: Secondary to foci elsewhere in the body.
      b. Toxic: Secondary to generalized infections such as smallpox, scarlet fever, influenza, puerperal fever, etc.
      c. Traumatic: Resulting from contusion of perirenal tissues or infection of hematoma.

   B. ***Secondary.***
      a. Resulting from lesions of the kidney, such as nephritis, pyelonephritis, tuberculosis, nephrolithiasis, etc.
      b. Resulting from inflammatory conditions of the skeletal and muscular structures making up the renal fossa such as myocytis, spondylitis, osteomyelitis, etc.

II. Suppurative perinephritis.

   A. ***Primary.*** (Independent of kidney lesions or those of neighboring thoracic and abdominal organs.)
      a. Hematogenous: Secondary to foci elsewhere in the body—skin lesions such as boils, furuncles, carbuncles, impetigo, eczema, etc.; osteomyelitis, paronychia, etc.
      b. Toxic or hematogenous: Secondary to generalized infections such as smallpox, scarlet fever, typhoid fever, influenza, puerperal fever, anthrax, gonorrhea, etc.
      c. Traumatic: Caused by lowered resistance of perirenal tissues resulting from contusion, infection of small and large hematoma, wounds, etc.

   B. ***Secondary to the following extraneous lesions:***
      a. Kidney diseases: abscess formation, carbuncle, pyelonephritis, pyonephrosis, tuberculosis, lithiasis, etc.
      b. Suprarenal diseases such as Addison's disease, infections of adrenal gland, etc.
      c. Intestinal lesions: appendicitis, infections of the duodenum, intestines, and colon.
      d. Affections of the abdominal and pelvic organs: spleen, pancreas, prostate, uterus, etc.
      e. Infections of the skeletal and muscular structures making up the renal fossa: tuberculosis of the spine, myocytis of psoas muscle, etc.
      f. Thoracic lesions: suppurative pleurisy, lung abscess, suppurative mediastinitis, etc.
      g. Postoperative: Abscess formation after nephrectomy: secondary to silk sutures, to leaving portions of infected kidney behind, to tuberculous involvement of the perirenal tissues and to insufficient drainage after kidney operations.
      h. Unusual conditions: Secondary to foreign bodies such as bullets, etc.

SIGNS AND SYMPTOMS

I. *Nonsuppurative Perinephritis.*—The onset of perinephritis is insidious; it is characterized by pain, hematuria, and occasional tumefaction of the kidney. This pain is usually experienced in the upper abdomen or loin and is of the constant, dull

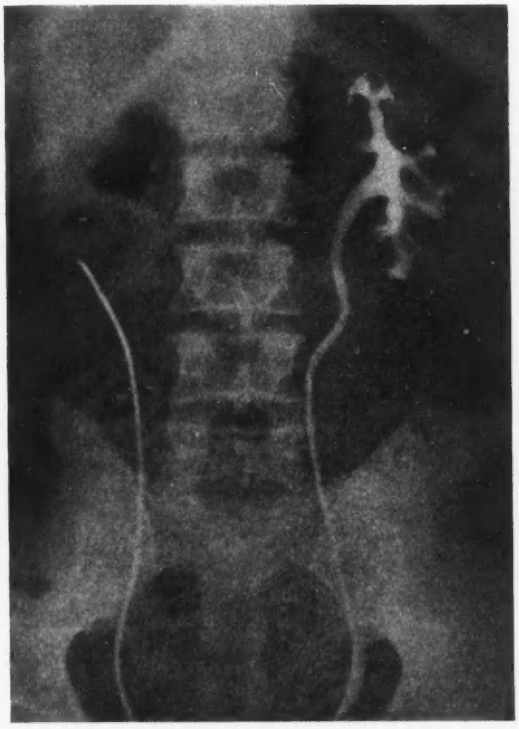

Fig. 1.—Ureteropyelogram in vertical position of male, age 34, presenting persistent fever, pain and tenderness in left kidney region and slight leukocytosis. Note obscuration of the psoas shadow and immobility of the kidney. Perinephritic abscess suspected, but at operation cicatrizing perinephritis was encountered which had encased the kidney in an inelastic shell impairing its function and anchoring it to the surrounding structures.

variety, nonradiating in character. It might also simulate the form of renal colic which is usually associated with calculous disease, strangulation of the kidney, and ureteral stricture. It is persistent and does not yield to medical treatment, gradually wearing down and weakening the patient. Perinephritis is often accompanied by varying degrees of interstitial nephritis which might be well advanced or relatively of very small degree. This associated nephritis may not give rise to any signs, yet the accompanying perinephritis may be very extensive although no albumin nor casts are found in the urine. Hematuria occurs in a certain percentage of cases; in others red blood cells are found only by making a microscopic examination of the urine. It is sometimes caused by an associated nephritis, but in most cases the blood is due to strangulation and congestion of the kidney, resulting from compression by the cicatrizing perinephritis, which tightly encloses the kidney in a nonelastic shell. In nonsuppurative perinephritis there is usually no fever and no leukocytosis. In some cases there is slight elevation of temperature, causing one to confuse it with perinephritic abscess. Such was the case of Mr. W. M., who entered Southern Pacific Hospital on September 10, 1931, because of constant, dull, aching, nonradiating pain in the left loin, chills and fever, malaise, and anorexia. Urological examination revealed tenderness in the costovertebral angle, obliteration of the psoas shadow, and a normal kidney which was found to be firmly fixed to the surrounding structures. We thought that we were dealing with a perinephritic abscess and decided on surgical intervention. In exploring the renal fossa we failed to encounter suppuration; and the perirenal fat was found to be involved by an inflammatory process undergoing resolution. Careful inspection of the kidney failed to reveal any cortical abscesses, but pathological examination of the excised perirenal fat revealed subacute, nontuberculous, cicatrizing perinephritis. The patient made an uneventful recovery; the wound healed and he has been relieved from the pain of which he complained.

In some cases there is enlargement of the kidney, particularly in that type of perinephritis characterized by fibrolipomatosis in which the fatty capsule has become hypertrophied, hardened, and thickened, involving the entire renal fossa and sometimes invading the renal parenchyma itself. (See Fig. 1.) Palpation of the kidney with employment of a fine sense of touch, so well developed by the older masters, will aid in distinguishing the fibrolipomatous type of perinephritis from enlargement of the kidney due to other causes.

Immobility of the kidney is a characteristic sign of perinephritis and cortical abscess of the kidney. Lack of motion of the kidney during respiration was first described by Albarrán in the latter part of the last century, who pointed out that one could often diagnose perinephritis with adhesions from other lesions. The following are his exact words: "Du fait que le rein augmenté de volume à la palpation, ne présentait pas de mobilité spontanée, pendant que le malade exécutait de grandes inspirations."

Lack of normal mobility or descent of the kidney as determined by making a pyelogram in the vertical position was first described by the author in 1925. It is a very important differentiating sign in the diagnosis of suppurative and nonsuppurative perinephritis as well as inflammatory lesions of the renal cortex. Its reliability has been verified repeatedly by operation for the past seven years. Another diagnostic point is displacement of the ureter which is caused by hypertrophy of the perirenal fat or by adhesions of the cicatricial tissue of the perinephritic space to the blood vessels making up the renal pedicle.

II. *Suppurative Perinephritis.*—Like perinephritis, the onset of perinephritic abscess is rarely sudden. The abscess develops rather slowly, does not manifest itself for some time, and is usually discovered only after it has produced general symptoms characterized by persistent fever, chills, obscure abdominal symptoms, and additional signs of encapsulated infection. Of all the signs and symptoms, fever is the most constant and reliable guide in diagnosis; it, the fever, is usually ushered in with a chill, is remittent in type, and because of this persistent elevation of temperature perinephritic suppurative processes are often confused with typhoid fever, ulcerative colitis, influenza,

Fig. 2a.—Ureteropyelogram in horizontal position of female, age 30, presenting persistent pain and tenderness in left kidney region over a period of ten years. The position of the kidney is indicated by markings on the lumbar vertebrae, the upper pole being located opposite the transverse process of the twelfth thoracic and the lower pole opposite the lower portion of the body of the third lumbar vertebrae.

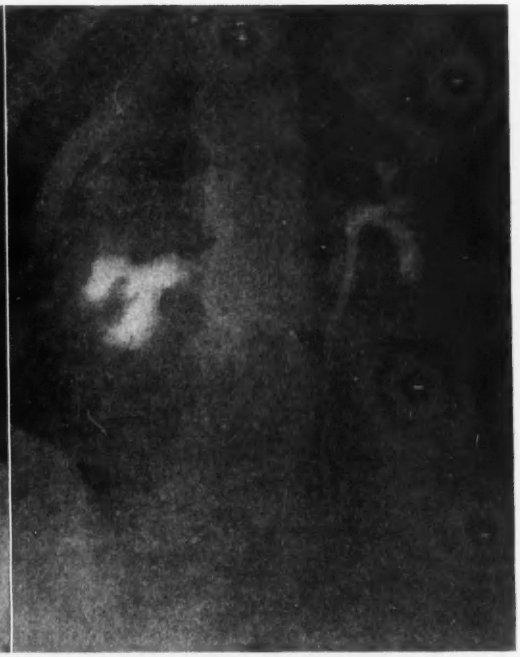

Fig. 2b. — Ureteropyelogram in vertical position of same case. The right kidney makes quite an excursion caudad, whereas the left kidney remains anchored in place. Pyelonephritis diagnosed because of persistent renal pain and immobility of the kidney. Operation on April 27, 1932, confirmed extensive cicatrizing perinephritis.

pleurisy, malaria, and other infections. Pain is quite variable, usually of the constant, dull, nonradiating variety, located in the flank or upper abdomen. In patients presenting second and third degree ptosis of the kidney, the pain may be very low in the abdomen, causing one to mistake perinephritic abscess for cholecystitis, appendicitis, salpingitis, pancreatitis, splenitis, hepatitis, and other abdominal conditions. In some cases the pain experienced in the renal fossa is rather sharp and may radiate to the abdomen, umbilicus, scrotum, or shoulder. Gastro-intestinal symptoms—nausea, vomiting, and constipation—are quite common. I recall a school teacher, age twenty-three, presenting pain in the upper abdomen, fever, and leukocytosis over a period of six weeks, who had lost forty-three pounds because of persistent nausea and vomiting. The severity of the gastro-intestinal symptoms distracted the attending physician's attention from a perinephritic abscess secondary to renal carbuncle which was later successfully treated by surgical drainage.

Tumefaction of the renal fossa is an important diagnostic sign. The swelling is usually associated with the kidney, does not move with respiration or with change of posture. Tenderness of the costovertebral angle, spasm and rigidity of the overlying musculature, congestion and reddening of the superficial skin, occur only after the abscess has attained large proportions, at which time it presents little difficulty in diagnosis. Needling the retrorenal space for the purpose of withdrawing pus for diagnosis is not without danger, particularly if the abscess happens to be located in front of the kidney. I recall a case of perinephritic abscess secondary to a boil in the gluteal region in which repeated punctures of the renal fossa elicited blood, but never pus. At operation an abscess was found anterior to the lower pole of the kidney, and in order to have entered it with a needle it would have been necessary to have traversed the entire kidney.

Examination of urine collected directly from the kidney in suspected cases offers little aid. In fact, in perinephritis, etc., there is a paucity of urine findings as compared to the severity of the illness. It usually shows slight trace of albumin, a few leukocytes and organisms and an occasional cast such as one finds in general infections such as pneumonia, typhoid fever, influenza, etc. In 1911 Baum showed that a certain percentage of cases of perinephritic abscess presented staphylococci in the urine if one would take the pain to centrifuge the urine over a long period of time and subject it to culture. Both Braasch and the author have been able to discover staphylococci in only a rather small percentage of such cases, and this sign, although of great assistance when present, occurs too infrequently to be of material value.

DIFFERENTIAL DIAGNOSIS

Many differential points in the diagnosis of suppurative and nonsuppurative perinephritis have been considered in the discussion of their signs and symptoms. The presence of persistent fever,

pain and tenderness in the kidney region, with lack or at least paucity of positive signs of infection in the kidney itself, should cause one to suspect perinephritis with or without suppuration.

The employment of the x-ray is of great aid. In cases of perinephritic abscess, fibrolipomatosis or extensive cicatrizing perinephritis, there is often obscuration of the margin of the psoas muscle, lower ribs, transverse processes of the lumbar vertebrae, and the kidney itself. The margins of the opaque shadows cast by these bony and muscular structures are rather indefinite and are not as sharply defined as in normal cases. This point was emphasized by Alexander and Revesz. Another diagnostic point is curvature of the spine with convexity away from the abscess. And this has been emphasized by Alexander, Lipsett, and Beer. Peacock recently pointed out the great diagnostic value of displacement of the kidney and ureter anteriorly and laterally due to tumefaction of the renal fossa, so well demonstrated by employing stereoscopic films. As has been mentioned before by the author in this and other papers, lack of renal mobility, ascertained by taking a pyelogram in the vertical posture, is of great importance in determining suppurative and nonsuppurative perinephritis as well as abscess formation of the cortex of the kidney. Still, with regard to x-ray, obscuration of the structures making up the renal fossa has been the subject of considerable speculation. In some cases it is due to the collection of pus in the renal fossa, the thickening of the fatty capsule due to fibrosis, hypertrophy of the perirenal fat, or to the edema usually associated with these inflammatory lesions. Occasionally a case of periarthritis, originating from spinal or hip disease, has been mistaken by the urologist for suppurative or nonsuppurative perinephritis. I wish to emphasize that these diagnostic roentgenological points are of value *only* when they are considered together with a careful study of the history, clinical course and findings in each individual case.

Fig. 3a.—Ureteropyelogram in horizontal position of a clergyman, age 45, presenting persistent pain in solitary kidney ten years after nephrectomy of its fellow for pyonephrosis.

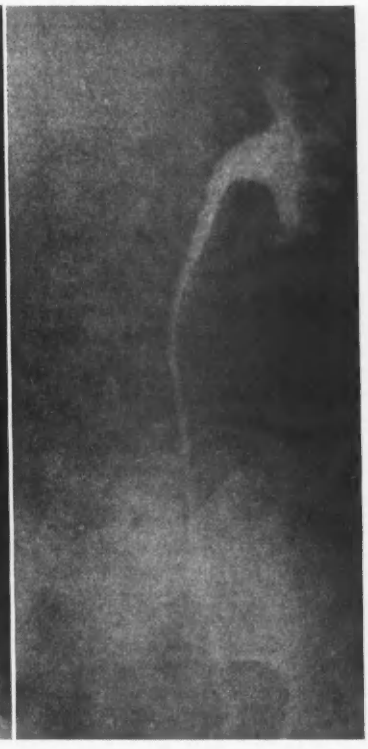

Fig. 3b.—Ureteropyelogram made in the vertical position, demonstrating the author's sign: lack of renal mobility which is always demonstrated by making a pyelogram in the vertical posture and is due to suppurative and nonsuppurative perinephritis or cortical abscess formation of the kidney.

TREATMENT

A certain number of cases of inflammatory processes of the perirenal tissues undergo resolution spontaneously, causing no further symptoms to the patient nor damage to the kidney. Other inflammatory conditions result in frank suppuration which may be limited to the renal fossa or may rupture into the lung, peritoneal cavity, or into the skin of the loin. Others result in sclerotic thickening of the perirenal capsule which may surround the kidney and ureter, impairing the functional activity and efficiency of the kidney and obstructing the outflow of urine. This results in hypostenuria, a term coined in order to depict the inability of the kidney to adjust itself to increased demands on its functional activity by reason of its being encased in a hard, inelastic, fibrous shell formed by fibrosis of the perinephritic tissues, which impairs the velocity of the blood stream in the kidney and hampers its efficiency. In others there is a hypertrophy of the perirenal fat, so-called fibrolipomatosis, which may involve the renal fossa and invade the hilus of the kidney and renal parenchyma itself. (See Fig. 4.)

Undoubtedly a certain number of cases of nonsuppurative perinephritis undergo resolution, causing little or no damage to the kidney nor further disturbance to the patient and require no further treatment. But for the cases in which fibrosis of the renal capsule and cicatrization of the perirenal fat cause persistent pain and impairment of renal function, surgical intervention is the only chance for relief.

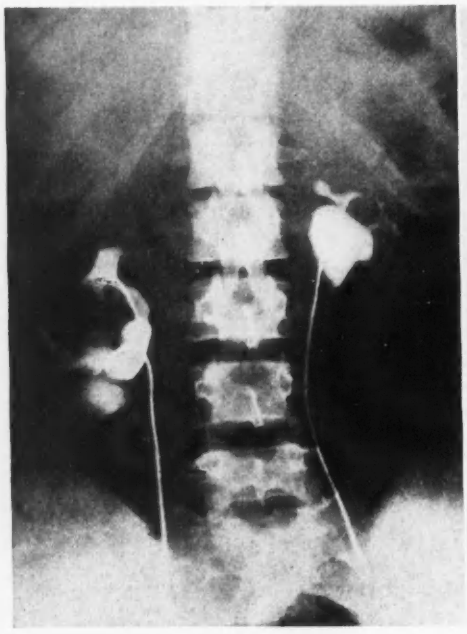

Fig. 4a.—Bilateral ureteropyelogram of female, age 29, presenting right-sided lumbar pain and tenderness of costovertebral angle. Note bizarre pyelogram presenting a pressure defect of renal pelvis.

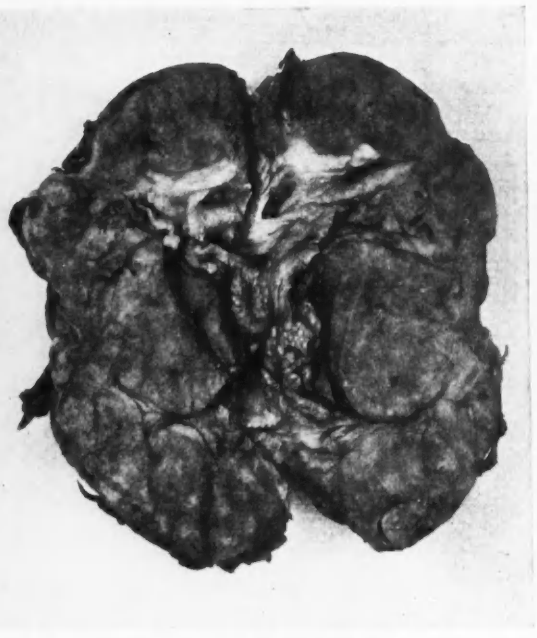

Fig. 4b.—Specimen removed by operation demonstrating invasion of the parenchyma of the kidney by fibrolipomatous infiltration of the perirenal fat, due to advanced perinephritis.

Nephrolysis, which consists of freeing the kidney of its cicatricial investment, and of destroying its pathological conglutinations, adhesions and attachments to surrounding structures, was first performed by Rovsing and then later advocated by Kolischer and O'Connor. Unfortunately this beneficent operation has not been popularized and is rarely employed, if it is not entirely overlooked by the profession. In properly selected cases it frees the patient from great suffering and restores the kidney to normal function. Such a case is that of Rev. T. O., who entered St. Mary's Hospital on April 9, 1931, because of persistent, dull pain, and the sensation of fullness in the left lumbar region. The right kidney had been removed nine years before because of pyonephrosis. Pain in the opposite kidney occurred some five years later and was attributed to pyelonephritis and stricture of the lower ureter as well as to compensatory hypertrophy of the kidney. In spite of the fact that the infection in the remaining kidney had been cleared up by routine lavage and the ureter dilated to fifteen (Charrière), the symptoms continued. As one could hardly attribute the persistence of pain in the remaining kidney to compensatory hypertrophy some ten years after nephrectomy of its fellow, a complete investigation of the kidney was repeated. In making a pyelogram of the solitary kidney, it was found to be immobile in the vertical position, being anchored to the surrounding structures by dense adhesions. (See Fig. 3.) There was obscuration of the shadow of the psoas muscle, vertebrae, and lower ribs. Surgical intervention was decided upon and, on approaching the kidney, it was found to be surrounded by a shell of thickened, indurated, sclerotic tissue which involved the perirenal fat and capsule of the kidney. The major portion of the thickened perirenal fat was removed and the kidney partially decapsulated. The patient made an uneventful recovery and was relieved from his debilitating pain, which in his case was unquestionably due to cicatrizing perinephritis.

In cases in which fibrosis is limited to the true capsule, decapsulation alone will often suffice to relieve pain and benefit any associated nephritis. In stripping the renal capsule it is well not entirely to separate it from the kidney. After freeing it from the kidney, one should replace it on its convex surface, facilitating future exposure of this organ should surgical intervention be required at a later date. In cases in which pain is marked, it is well also to perform denervation or renal sympathectomy. This consists of severing the nerves of the kidney which are found to be located on the superior surface of the renal artery and its main branches.

The treatment of suppurative perinephritis, commonly known as perinephritic abscess, consists of surgical drainage. Although a small percentage of these cases might undergo resolution, the greater percentage require open drainage. In opening the renal fossa one must explore the entire renal loge, as the abscess may be located anterior and inferior to the kidney. It is well to explore the kidney, particularly that portion which is found to be in close proximity to the abscess, in order to detect single or multiple cortical abscesses or carbuncle of the kidney which, if left untreated, might defeat the purpose of the oper-

ation. The removal of pus by needling, or aspiration, was performed by Gaddy and by Hartmann in the latter part of the nineteenth century. This procedure, although of some value in limited cases, has given way to the more accurate method of wide incision which is more efficacious in the majority of cases.

In primary suppurative and nonsuppurative perinephritis it is indeed important to clear up foci elsewhere in the body, such as skin lesions. In secondary perinephritis, treatment should be instituted to eradicate lesions of the kidneys, thoracic, and abdominal organs and the numerous extraneous lesions—completely tabulated in the table accompanying this article.

CONCLUSIONS

1. Suppurative and nonsuppurative perinephritis occur independently in a certain number of cases, as well as being secondary to diseases of the kidney and other extraneous lesions.

2. Chronic perinephritis is divided into (1) fibrosis of the kidney capsule; (2) chronic cicatrizing perinephritis with sclerosis of the perirenal fat; (3) fibrolipomatous perinephritis in which the fatty capsule is sclerosed, indurated and hypertrophied, sometimes forming a veritable lipoma which may invade the kidney parenchyma; and (4) suppurative perinephritis or perinephritic abscess in which the inflammatory processes have undergone suppuration.

3. The diagnosis of chronic perinephritis is obscure. Important points in distinguishing it are persistent pain, absence of urinary findings, and (the author's sign) lack of renal mobility, as evidenced by taking a pyelogram in the standing position. This lack of renal mobility demonstrates without any doubt that there are inflammatory processes of the perinephritic tissues which anchor the kidney in place.

4. The most important points in the diagnosis of perinephritic abscess are persistent fever, relative paucity of urine findings, and obscuration of the roentgenological shadow of the kidney, muscular and skeletal structures of the renal fossa, displacement of the ureter and immobility of the kidney as evidenced by palpation, and making a pyelogram in the vertical position.

5. The treatment of persistent, chronic, cicatrizing and fibrolipomatous perinephritis consists of nephrolysis and partial decapsulation by which the kidney is decompressed and liberated from its pathological encasement, adhesions, and conglutinations.

450 Sutter Street.

DISCUSSION

GEORGE F. SCHENCK, M. D. (Westlake Professional Building, Los Angeles).—The most significant and most interesting part of Doctor Mathé's paper is that which deals with nonsuppurative perinephritis. The condition occurs to a variable degree with all of the diseases of the kidney that are of bacterial origin. In those conditions where primary perinephritis occurs it is often difficult to make a diagnosis. Doctor Mathé has previously contributed an original point that is a material aid in making the diagnosis; and that is, fixation of the kidney to the contiguous tissues producing immobility, which is manifested by taking kidney pictures with the patient standing.

Heretofore, we have not placed sufficient clinical significance on nonsuppurative perinephritis as a cause of discomfort to the patient, and as a source of constant damage to the kidney.

Suppurative perinephritis, commonly known as perinephritic abscess, frequently produces problems in diagnosis. The condition may simulate almost any disease in the chest, gastro-intestinal tract, or regional muscular and skeletal systems. The condition is masked more than half the time by the primary renal pathology. None of the symptoms or roentgen ray findings are by any means constant. The obliteration of the outline of the psoas muscle, curvature of the spine away from the abscess, and displacement of the kidney and ureter anteriorly and laterally are very suggestive when present. The urinary symptoms and findings are variable and are of little aid in making the diagnosis. The leukocyte count, as a general rule, is high, 10,000 to 30,000. A dull loin ache is perhaps the commonest and most significant symptom of nonsuppurative and suppurative perinephritis. Pain is often deceiving, but if localized in the loin and costovertebral angle, it is significant. Usually the pain is aggravated by motion and the patient walks with a rigid back. The temperature varies from zero to 104-105. It may be fulminating, or of the typical picket-fence type. If the infection is severe, chills usually precede the febrile onset, and may be followed by drenching sweats. Incidentally, the persistence of sweats is almost pathognomonic of suppuration.

Doctor Mathé has adequately emphasized the importance of complete kidney studies that include standing pyeloureterograms in these cases of primary and secondary perinephritis. The treatment is primarily surgical.

❋

ROBERT V. DAY, M. D. (Wilshire Medical Building, Los Angeles).—It has been a privilege to hear Doctor Mathé's classical presentation of this important subject, from a standpoint of both diagnosis and treatment. He is to be congratulated on working out the Mathé sign—original with him. A certain other sign in suppurative perinephritis, emphasized by Peacock a few years ago, is a greater or less tendency to fixity of the thigh as a result of the reflex contracture of the psoas muscle in perinephritic abscess. As a result of personal observation I am inclined to believe that staphylococci, without pus, will be found in the urine of more than half the patients, if a special technique is used in the fixation of the smear of the tiny urinary sediment.

I wish to emphasize the warning against needling. If pus is present, incision will be required. Failure to obtain pus by aspiration is no indication of its absence; withal needling may well result in a serious accident.

❋

FRANK HINMAN, M. D. (384 Post Street, San Francisco).—Doctor Mathé has given a very interesting and complete discussion of the perirenal infections. It is generally regarded that of the two sources, renal and extrarenal, renal is by far the commonest and some even regard it as the only source of perirenal abscess worth clinical consideration. Diagnosis is often extremely difficult. Many of these patients get well. Stereopticon pictures, with catheter in ureter, are often quite helpful as the catheter can be seen to go up around what would be taken to be an abscess. Tumors of the perirenal area are extremely uncommon, although there have been about eighty lipomata reported. The differentiation of these tumors from renal tumors is more a problem than from perirenal abscess.

PHYSIQUE AND PSYCHE IN PHTHISIS*

By KENNETH P. JONES, M. D.
AND
EMIL BOGEN, M. D.
Olive View

DISCUSSION *by F. M. Pottenger, M. D., Monrovia; Aaron J. Rosanoff, M. D., Los Angeles; Frederick Proescher, M. D., San Jose.*

MORE than two thousand years ago Hippocrates [1] wrote: "The form of the body peculiarly subject to phthisical complaints was the smooth, the whitish, that resembling the lentil; the reddish, the blue-eyed, the leukophlegmatic, and that with the scapulae having the appearance of wings." Throughout the succeeding centuries the belief that tuberculosis was the result of an inherited predisposition to the disease has persisted.[2]

In the course of time other types of individuals were found to develop pulmonary tuberculosis, and descriptions of "tuberculous diatheses" have been given by other clinicians that differ widely from those presented by the classical writers. Thus, Hufeland [3] more than a century ago characterized the "scrofulous diathesis" as distinguished by a quite contrasting set of attributes, namely, "a short thick neck, jaws stronger and broader than common, head rather large in proportion to other parts of the body, especially the back part of the head, light-colored hair, face slightly bloated, its skin delicate, transparent, white, somewhat rosy, eyes blue and pupils very large, upper lip rather thick, nose a little swelled, red and shining. The whole body appears to be fat and well nourished, but on closer examination the flesh is found to be flabby and soft, it does not possess the resistance and elasticity which indicate health and vigor. The belly is larger than it ought to be."

VIEWPOINTS IN MODERN PATHOLOGY

With the development of scientific pathology, attempts were made to find internal signs of "predisposition" to tuberculous disease,[4] and the founder of cellular pathology, Rudolph Virchow,[5] himself, devoted much time and effort to attempting to demonstrate abnormal conditions of the lymphatic and hematopoietic system as preceding the actual development of the disease. Anatomical peculiarities, such as the "fixed" first rib and narrow thorax, small heart and even such "stigmata" as malformations of the pinna of the ear have been urged as important signs of an inherited predisposition to tuberculosis.[6] Biochemical changes, especially the much vaunted "demineralization" of the French writers,[7] have also been investigated with the same idea in mind. A rather pretentious anthropometric survey of a hundred patients led Dr. George Draper [8] to some remarkable conclusions. He found, in tuberculous people, "The eyes are close-set in a rather narrow face, and the eye-slit is small. The neck is extraordinarily long. The trunk is a trifle short in relation to the lower extremities, and the chest tends to flatness. The shoulders tend to wideness both in respect of trunk length and pelvic breadth. The lunulae at the base of the nails were very often absent."

Efforts have also been made to describe a tuberculous personality from the standpoint of psychology and psychiatry.[9] The undue prevalence of the disease in the schizophrenic psychoses has led to the identification of the symptoms of the schizoid tendencies as indications of a predisposition to tuberculosis.[10] Consumption has been considered by some writers as a mark of superior intelligence,[11,12] by others as an evidence of constitutional psychopathic inferiority.[13] Phychoanalysts have not allowed this opportunity to escape them, and the literature contains elaborate descriptions of the complexes and repressions precedent to the development of the disease.[14]

OPPOSING VIEWS

The most vigorous opposition to this conception of constitution or temperament predisposing to the development of phthisis we owe to the genius of Villemin, the Frenchman who first demonstrated the infectiousness of tuberculosis. In an exhaustive and keen analysis of the significance of heredity and "diathesis" in the pathogenesis of tuberculosis, he proclaimed that tuberculosis is due to an infecting agent and concludes: "It is doubtful whether these constitutional dispositions have a real authentic part, even in the slightest degree, in the aptitude to contract the disease." [15]

It was only after another twenty years that this infecting agent was actually identified by the genius of Robert Koch, and since then the earlier dominance of the idea of "diathesis" or "constitution" as the causative factor in the development of tuberculosis has subsided into the lesser claims of contributing or accessory phenomena. Nevertheless, "the subject of the predisposition of certain individuals to infection seems to receive nearly as much attention today as it did prior to the tubercle bacillus era." [16]

The extent to which environment and pathologic conditions may alter the appearance, and even the bodily proportions, has not been sufficiently investigated, and there is an unconscious tendency to attribute to the innate pattern of the individual all those appearances that are noted at the time of first examination. The explanation given by Villemin himself for most of the phenomena actually observed in patients with tuberculosis—that they are really effects and evidences of the actual existence of the disease process rather than predisposing factors antecedent to the infection—has more and more tended to pervade the professional attitude among phthisiologists. One of the most impressive descriptions of the effects of the tuberculous process in almost any extreme case of chronic fibroid phthisis is that given by the keen-eyed Araetaeus nearly two thousand years ago.[17]

"The voice is hoarse; the neck is a little bent, thin, and turned hither and thither feebly as though it were stretched; the fingers are thin, but thick around the knuckles, and in this condition the bones appear to be uncommonly large because the flesh is wasted around them; the nails of the fingers are curved; the belly is

* From the Olive View Sanatorium of the County of Los Angeles.
* Read before the Pathology Section of the California Medical Association at the sixty-first annual session, Pasadena, May 2-5, 1932.

shriveled and wide because, on account of emaciation, it does not contain as much flesh, compared with the fascia as it did before, nor has it preserved its roundness; on this account also the nails have become curved, because the flesh which abounds in the tops of the fingers and gives a certain kind of support to them is now made rather hard and solid; this, too, is why the disease affects the nails themselves. The nose is sharp and thin, the cheek bones stand out and are red; the eyes are sunken, bright and flashing; the countenance is swollen and pale or bluish; the thin parts of the cheeks are so adherent to the teeth that they give the individual the appearance of laughing. All other parts of the body are the same: everywhere there is thinness and absence of flesh; the muscles of the arms are not visible anywhere and there is not even a vestige of the breasts and the nipples stand out prominently; one cannot only count the ribs but it is even possible to detect literally where they leave off; the joints of the ribs where they are attached to the spine and the vertebrae are not even hidden and their insertion into the bone of the chest is plainly visible; the intervals between the ribs are concave and turned into the figure of a rhombus along the entire circumference of the bones. The precordium is empty and drawn up; the abdomen and the loins are adherent to the spine; the joints, the tibia, the hips, and the forearms are conspicuous, prominent, and devoid of flesh; even the spine, which before was hollow, stands out prominently above the vertebrae with the muscles on both sides consumed; the entire scapulae are visible, standing out like the wings of a bird."

This is the picture so frequently encountered in the terminal wards of general hospitals and tuberculosis sanatoria, and on the autopsy table; and it is by no means easy for the observer to recognize in this emaciated frame the remains of what may have been at one time a robust, heavy-set, and phlegmatic athlete. The changes in the appearance, due to bone changes from a pituitary tumor in acromegaly, so well brought out by Cushing and his followers, are not more marked or striking than those resulting from the invasion by the acid-fast bacillus and its products. The physician who has actually observed the transformation take place may himself begin to doubt whether the individual ever was of the stolid and solid build that he appeared on first examination; but resort to records and photographs will demonstrate that the changes have actually taken place. On the other hand, in our sanatoria we may also see the reverse transformation occur, apparently moribund patients, reduced by the ravages of the disease to the picture so graphically described above, may, through the magic of modern active treatment of tuberculosis, or even, at times, in the absence of any recognizable therapy, take a new lease on life, fatten up, and blossom out as a completely different-looking individual.

But even though great changes are undoubtedly produced by the disease itself, the impression persists in many quarters that there may be some difference in bodily build or personality make-up that is antecedent to the invasion by the tubercle bacillus, a precursor or prepared soil, as it were, for the development and spread of the infection. Clinical observation attributes to starvation, inhalation of silica dusts, and other environmental factors an important rôle in accelerating the course of pulmonary tuberculosis; it is but natural, therefore, to inquire whether any preëxisting conditions, inherited or acquired, may have existed prior to the development of the acid-fast infection itself, conditions which may accentuate the progress of the disease and darken its prognosis.

PREDISPOSITION

In view of the widespread popular belief in the importance of the constitution or predisposition in the development of tuberculosis, and the frequent assumption of such a relationship in the scientific and medical literature, an objective investigation appeared desirable. Clinical impressions, uncontrolled by comparably recorded observations, are notoriously unreliable, and the importance of modern statistical methods in the evaluation of the data has been far too often overlooked. Of course, it is recognized that the mere demonstration of a statistical correlation between phenomena, such as the disease and the measurements and other observations on the patients, is in itself of no convincing value in distinguishing between the causes and the effects of the pathologic entity. However, this distinction is necessarily premature until the actual concomitance has been established. After correlation is once demonstrated, further investigations are in order to elucidate the exact causal significance of the findings.

STUDIES AT OLIVE VIEW SANATORIUM

A study was therefore undertaken of patients at the Olive View Sanatorium,* designed to reveal the relative incidence of the different signs and symptoms of tuberculous "constitution" or "diathesis" as suggested by the host of authors who have discussed these matters in patients with different amounts of tuberculous infection and with different apparent outlooks for recovery. The study was intentionally limited to patients with undoubtedly advanced lesions of pulmonary tuberculosis. They have been classified, on the basis of their present capacity for activity, into ambulant patients whose lesions are apparently quiescent, including those who are now working in the institution, and bedfast patients with active or recently active lesions, including those with progressive disease where the prognosis is practically hopeless.

A hundred such individuals of each sex were subjected to an intensive physical, anthropometric, anthroposcopic, and functional investigation to see if any differences in the findings could be noted between the ambulatory patients, who are apparently on the road to recovery, and the bedfast patients, who appear to be more sadly stricken. This included twenty different bodily measurements, taken with instruments especially constructed for this purpose; record of more than a score of visual observations that could not be readily reduced to numerical reckoning; and determination of the daily temperature, pulse and respiratory rates, the vital capacity, the breath-holding time, the strength of the forearm as measured with each hand on a spring dynamometer, the blood pressure, and the speed of motor movement as shown on a counting machine, as well as the fatigue revealed by the decrease in this speed in two successive half-minute periods. The gen-

* Olive View Sanatorium is the tuberculosis department of the Los Angeles County General Hospital, Unit One.

TABLE 1.—*Physique and Psyche in Phthisis.*

		Male	Female
Number of patients	Up	51	39
	Bed	49	61
Per cent American parentage	Up	52	56
	Bed	55	54
Per cent colored races	Up	20	15
	Bed	15	24
Per cent asthenic type	Up	35	49
	Bed	53	32
Per cent athletic type	Up	22	15
	Bed	14	10
Per cent pyknic type	Up	43	36
	Bed	33	58

eral type of body build was also noted, as nearly as possible, according to the classification described by Kretschmer.

They were also examined for the "personality" or psychologic and psychiatric evidences of deviations from the normal which have been suggested by different writers. For the estimation of native intelligence or mental age, the patients were asked the meaning of the words in the test list of one hundred words of increasing difficulty used in the Binet-Simon tests,[18] and the number of words correctly recognized was recorded. In the first hundred of these instances, this test was supplemented by the performance of the army alpha examination; but the two measures gave so high a degree of positive correlation that it was felt that the simpler single measure was sufficient. In a smaller number the McCall multimental test was utilized, with similar conclusions.

As a general index of personality make-up, a rating scale was prepared similar to that used in the Downey will-temperament test,[19] and filled out for each patient by the subject himself, his nurse, the doctor, an attendant upon the same ward, and by a neighboring patient well acquainted with the subject. These reports were graded according to the number of desirable, minus the number of less desirable, traits checked.

The Neymann-Kohlstedt[20] test was used as a measure of introversion-extroversion, not so much because of proved reliability of the test in measuring these qualities, as because this test as applied to three hundred patients in the Chicago Municipal Sanatorium[21] had disclosed a bimodal distribution of results which warranted further investigation. In other words, the Chicago workers had found that consumptives there observed tended to be either introverts or extroverts, and showed less than the normal incidence of neutrovert types.

The depression-elation test of Jasper[22] was used in the hope that, crude as it appears to be, it might aid in illuminating the elusive "spes phthisica" of which so much has been written but of which so little is really known.

A modification of the Woodworth personal data sheet[23] was used in the hope that it might help to evaluate the relative incidence of psychoneurotic manifestations among the patients who were recovering, as compared with those who were stationary or getting worse. Of course, about a dozen of these questions may actually reveal only the presence of actual symptoms of tuberculosis, and therefore the norm for this group should be considered as about twice the maximum figure of fourteen, suggested for the general population.

The Kent-Rosanoff association test[24] was given these patients with the idea that it might reveal abnormalities not disclosed by other forms of tests. The very low incidence of individual or abnormal responses, however, justifies omitting the analysis of the results of this test at this time.

All of the examinations were performed by the same worker (Doctor Jones), using as nearly as possible the same technique and apparatus. The questionnaire studies were all presented to the patients in mimeographed form, to be filled out and handed back to the investigator, and they were all marked by the same worker with the same set of standards for evaluating the returns.

RESULTS NOTED IN OLIVE VIEW STUDIES

The one hundred patients of each sex who were examined represent a fair random sampling of the adult patients at the Olive View Sanatorium. The higher percentage of ambulatory patients found among the men reflects the policy of the physicians to get the men up and about quicker than the women, who are kept more strictly on bed rest, rather than any real difference in the state of the disease in the two sexes. Nationality and

TABLE 2.—*Anthropometric Data.*

Measures	Rubrics	Male		Female	
		Median	Range	Median	Range
Age	Up	26	22-31	27	24-30
	Bed	29	24-35	25	21-33
Height	Up	174	169-180	162	156-164
	Bed	174	168-179	161	156-165
Sitting height / Height	Up	51	50-52	52	51-53
	Bed	50	49-52	52	50-53
Width / Height	Up	161	154-166	169	160-175
	Bed	158	151-162	168	160-175
Weight / Height	Up	22	21-24	20	18-22
	Bed	20	18-22	20	18-21
Width x depth	Up	52	48-58	42	40-46
	Bed	50	44-54	42	40-46
Depth / Width	Up	76	72-84	78	72-80
	Bed	78	70-84	74	70-80
Bi-iliac / Biacromial	Up	74	70-76	78	74-82
	Bed	74	68-76	78	74-82
Cephalic index	Up	77	75-80	79	77-81
	Bed	78	75-80	79	78-80
Interpupillary / Facial width	Up	49	47-51	50	47-51
	Bed	50	47-51	51	49-52

TABLE 3.—*Physiologic Data.*

Measures	Rubrics	Male		Female	
		Median	Range	Median	Range
Blood pressure	Up	120	112-128	116	110-126
	Bed	114	110-122	110	100-116
Strength grip	Up	125	115-140	70	60-80
	Bed	120	100-140	70	60-80
Speed tapping	Up	120	110-130	102	92-110
	Bed	114	106-130	106	96-120
Fatigue tapping	Up	26	14-34	26	14-32
	Bed	22	16-30	24	16-32
Vital capacity	Up	3000	2700-3400	1800	1500-2200
	Bed	2200	1700-2800	1600	1200-2100
Breath holding	Up	29	22-39	19	14-25
	Bed	19	15-28	18	15-25

tuberculosis has been discussed in a previous study,[25] but it may be mentioned here that the races included in this study showed no marked differences in their distribution among the ambulatory and bedfast patients. The age grouping is also quite similar between the two sexes, averaging about twenty-seven years, and there appears to be no significant difference in the average age in the different groups of patients studied.

The height of the men averages, as might be expected, about twelve centimeters higher than that of the women, but there seems to be no difference in the average height in the different stages of the disease. The sitting height is just over half of the total height of these patients, being just a trifle greater, relatively, in the women than in the men, and with no particular difference in the distributions among ambulatory and bedfast patients.

The width, as measured between the crests of the iliac bones, divided by the height[26] is, as might be expected, markedly greater in the women than in the men, and is in both sexes slightly greater in the ambulatory patients than in those confined to bed. This difference appears to be too small to warrant any inference that the bedfast patients tend more to the linear or narrow type of build, and probably simply reflects the very slight increase in the width measurement resulting from better nutrition. That this is so is indicated by the fact that the difference is more marked among the men, in whom, as may be noted, the difference in relative weight among the ambulatory and bed patients is also more marked. The weight in pounds, divided by the height in inches [27] shows, it is true, fewer differences than were anticipated; but, particularly among the men, there was a relatively lower weight among the bedfast patients. That this is less evident among the women may reflect the effect of the more frequent use of bed rest in this group.

In a recent study, Wertheimer and Hesketh [28] suggested that the volume of the trunk, relative to the height, was a fairer index to body build than merely a single linear ratio. Actually, on analysis, it appears that the cross-section area of the chest gives approximately the same results as the longer formula given by them. This shows little, if any, increase with increasing improvement among the patients, the slight difference among the men being again ascribable, perhaps, to the better nutrition found in the ambulatory group. Flatness of the chest has been considered an attribute of tuberculosis, while the deep chest is sometimes considered a sign of immunity. Neither in men nor in women did there appear to be any consistent variation in this characteristic with different conditions of the disease, the slightly deeper chests in the bedfast men, for example, being found only in the average and reversed in the examination of the lower limit of the median range.

The relatively broad shoulders claimed by Draper as a sign of the tuberculous constitution is absent in this group, the bed patients of both sexes having exactly the same biiliac-biacromial index as those who were up and around. The women, with relatively wider pelves, naturally showed a higher index than the men in this regard. The cephalic index varied from broad brachycephaly to slim dolichocephaly, but most of the patients showed a mesocephalic-shaped head, with little differences between the two types of patients, but naturally a slightly broader head among the women. The facial width was generally about twice that of the interpupillary distance, and showed a tendency to be slightly narrower in the bedfast patients of both sexes, resulting in a rela-

TABLE 4.—*Psychometric Data.*

Measures	Rubrics	Male		Female	
		Median	Range	Median	Range
Intelligence	Up	74	64-84	84	78-84
	Bed	76	66-84	78	66-86
Self judgment	Up	10	4-16	8	4-14
	Bed	12	6-16	12	6-16
Extroversion	Up	+2	−6-+8	−2	−10-+6
	Bed	0	−6-+4	−2	−8-+2
Depression	Up	1.7	1.5-1.8	1.6	1.5-1.7
	Bed	1.6	1.4-1.8	1.6	1.5-1.7
Psychoneurotic	Up	13	8-24	22	19-28
	Bed	16	10-25	17	11-24

tively broader interpupillary distance in this group. This finding, which is only to be expected in view of the differences in nutrition between the two groups of patients, is also just the reverse of the state described by Doctor Draper.

The general appearance of the patients, classified according to Kretschmer's [29] descriptions as asthenic, athletic, and pyknic, on the basis of simple inspection, showed a definite increase in the asthenic type among the bedfast patients among the men, and of pyknic types among the ambulatory men; but the reverse appeared to be the case among the women; and in both sexes the entire group of two hundred patients appeared to be fairly evenly divided between the so-called linear and lateral types of build. Excepting findings that are obviously related to nutritional status, no marked interrelationship between the different anthropometric measures was observed.[30]

Physiologic measurements gave a little more satisfying results. The blood pressure was significantly increased in both sexes among the ambulatory patients, as compared with those confined to bed. The vital capacity was also distinctly higher in the ambulatory patients than in the bed patients of both sexes. The length of time that the patients were able to hold their breath was also greater among the ambulatory patients. These differences, although present in both sexes, were much more marked among the men, whose average results were, of course, much higher than those of the women. The relatively smaller differences in the vital capacity among the ambulatory women may perhaps be due to the higher number of these patients who are receiving pneumothorax treatment, which accordingly reduces the available pulmonary volume.

The strength of grip was definitely increased in the ambulatory men, as compared to the bed patients, and the speed of tapping on a counting device was also greater in the patients who were up, though to a much less significant extent. In the women, however, there was no such difference observed. The fact that the men who are in bed do little handiwork, while many of the women are thus occupied, may suggest that the greater part of this difference of muscular strength and speed is due to the effects of disuse, rather than to any specific effect of the disease itself. Fatigue, measured by the reduction in the rate of tapping in successive half-minute periods, is less marked in the bed patients of both sexes than in those who are up and around. This is as interesting as it was unsuspected, and deserves further investigation for its elucidation.

The mental age, as revealed in the responses to the Binet-Simon test set of words, was quite high, generally above the accepted sixteen-year-old standard, except in those patients who, because of foreign tongue, were not adapted to this test. The median intelligence, as measured by this test, was somewhat higher among the women, but the range was quite similar and there was no consistent difference between the findings in the ambulatory and the bed patients. It is suggested that the rather high vocabularies revealed by this test among patients with tuberculosis may reflect the greater opportunities offered to these patients to use the library, the radio, the extension teaching services, and the time at their disposal for reading, talking, and study, as compared to the more exacting routine of industrial life.

Although the judgment ratings given by the patients for themselves were generally, as might have been expected, quite favorable, it was notable that the bed patients of both sexes gave themselves the higher ratings. To what extent this reflects the result of day-dreaming, with the absence of the disillusionment that comes to the ambulatory individual on actual trial of his powers, and to what extent it might be considered another manifestation of the "spes phthisica," a pathologic euphoria consequent on the disease process itself, cannot at this time be stated with assurance.

The introversion-extroversion test of Neymann and Kohlstedt showed most of the patients in the neutrovert zone, without any suggestion of the bimodal distribution reported by the Chicago workers. There is a slight tendency to introversion noted among the male bed patients as compared to the ambulatory ones, and among the women in general as compared to the men; but the differences are too slight to justify much speculative interpretation.

The depression-elation test of Jasper showed most of the patients in the moderately elated zone, with little, if any, difference between the sexes or the different classes of patients. The frequently undue optimism shown by these patients in general, and the relative absence of the pessimistic replies that might be justly expected from a group of individuals whose chances in this world are slim at best, is evidence that the "spes phthisica" is a genuinely present phenomenon and deserves fuller consideration of its diagnostic and therapeutic possibilities, whether the phenomenon is due to the disease process itself, as has been maintained by those who considered the toxic effect of tuberculin as allied to that of alcohol or stimulants, or to the environmental factors resulting from sanatorium care, where gain in weight is the rule and cares and worries are deliberately put in the background.

The psychoneurotic index, as shown by the personal data sheet of Woodworth [23] revealed an average of about fifteen complaints among the men and about twenty among the women. In view of the symptoms of tuberculosis included in this sheet, these figures demonstrate an unexpectedly low incidence of neurotic types among our patients. The paradoxical increase in the number of complaints in the women who are out of bed, which was not noted in the case of the men, suggests that "spes phthisica" may have led the sicker women to suppress some of their legitimate complaints.

Since our subjects were of the selected kind of people admitted to the Olive View Sanatorium, and since exposure to tuberculosis varies greatly among different groups in the general population, it is naturally impossible to obtain a valid group of normal individuals with which to compare them. Our attention has therefore been directed mainly to the contrasts shown between those of our pa-

tients who were apparently recovering and those whose prognosis appeared less favorable. However, it may be interesting to note that the general population described by Draper—consisting apparently of New York hospital patients, averaging about 3.5 centimeters shorter than our group, about five per cent greater width-height index, and a slightly greater weight-height index among the women—showed less than one unit difference in sitting height over height, chest width times depth, chest depth over width, cephalic index, or male bi-iliac over biacromial measurement. The greater weight and width of his women patients may be explained by the fact that more than a fourth of them were gall-bladder cases. Comparison of our data with the figures for the measurements of Yale University men show similarly little marked variation, despite the great racial differences.

SUMMARY

The only physical differences noted between tuberculous patients so sick that they cannot leave their beds and those already ambulatory and even working is that the bedfast patients tend to be slightly narrower and lighter, with reference to their height, than the ambulatory patients, obviously because of loss of weight from the disease. Loss of weight is more evident in the male patients because of the more efficient bed rest and treatment among the women. All other claimed and purported physical stigmata of tuberculosis were absent from our subjects.

Pathologic measurements showed that the blood pressure, vital capacity and breath-holding time were greater in the ambulatory subjects; but the differences were less marked among the women. Strength of grip and speed of finger movement was greater among the ambulatory men than among the bedfast men; but the differences were not found among the women. These differences might all be explained as evidences of the effect of the disease upon the lungs, and of the effect of disuse upon the skeletal muscles.

Psychologic tests failed to reveal any "inferiority" among these patients either in mental or psychiatric aspects. Most of the differences found might probably best be explained as effects of the peculiar environment of a sanatorium patient. Some indication of the existence of a pathologic euphoria, or "spes phthisica," however, might be inferred from some of the findings.

Careful quantitative investigation of a large group of patients of both sexes with varying amounts of pulmonary tuberculosis has accordingly failed to find objective support for any of the numerous popular generalizations concerning an anatomic, physiologic, or psychologic predisposition to tuberculosis, and suggests that the only difference between persons with tuberculosis and other persons lies in the effects of the infection and of the resultant environmental conditions.

Olive View Sanatorium of Los Angeles County
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DISCUSSION

F. M. Pottenger, M. D. (Monrovia).—Physiologic medicine requires a very close study of the physical and chemical constitution of the patient, and these are determined both by heredity and by environmental factors which modify the hereditary trends.

In their interesting study, Doctors Jones and Bogen rightly give consideration to the difference between patients who are ambulatory and those who are bedfast. There are so many variables that come in to determine a man's physical make-up and his psychical attitude that one is more or less lost when attempting to make a comparison.

When we are able to determine why one patient is able to bring about a healing of his primary infection and another is not able so to do, and why a resultant superinfection in one patient takes the form of predominatingly proliferative disease, and in the other a predominantly exudative disease, we will probably have some information concerning predisposition.

We must remember the excellent work of Long, in which he showed the influence of glycerol upon an experimental infection. Guinea-pigs fed upon a diet rich in glycerol grow tubercle bacilli in much greater

numbers than those which are not so fed. That changes in chemical constitution affect tubercle bacilli is also suggested by the seasonal variation in the disease. It has been shown that the spring months are characterized by more metastases in tuberculosis in the lungs, more miliary tuberculosis and more meningeal tuberculosis than other seasons. It has also been shown that there is a difference in endocrine glands both as to size and function in different seasons. The relative amount of calcium and potassium in the tissues shows a seasonal variation, and as has been pointed out by Wade Brown, there is a greater tendency to metastases in experimental syphilis and experimental cancer in the spring than in any other season. All of this goes to show that our internal environment is a big factor in the activity and the healing of disease.

In discussing the physical and psychical elements which make up the individual, it it necessary to bear in mind that while they are different and distinct they are still inseparable. The emotional life of the individual affects his physical machine, and the working of the physical machine, on the other hand, influences man's emotional stability. Man is like the proverbial dog Rover. "When he is sick he is sick all over."

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Aaron J. Rosanoff, M. D. (2007 Wilshire Boulevard, Los Angeles).—It seems to me that Doctors Jones and Bogen have rendered a service to the profession by laying the ghost of certain traditional but apparently unfounded notions of constitutional peculiarities, physical and mental, as factors in the etiology of tuberculosis.

It must be admitted that statistics of mental hospitals and institutions for the feeble-minded and for epileptics show an abnormally high morbidity and mortality from tuberculosis, and this is especially so in connection with the chronic schizophrenias. This fact, however, may be, in my opinion, fully accounted for by the difficulty of securing the coöperation of such patients in organizing a hygienic mode of living and by the overcrowding which so generally prevails in such institutions. My impression is that an assumption that patients suffering from these mental disorders are constitutionally predisposed to tuberculosis would be a purely gratuitous one.

At the same time, I doubt if this paper fully disposes of the question of an inborn predisposition to tuberculosis. Indeed, it would not appear that the conclusions drawn by the authors carry any such implication. Such an issue as that of the relative importance of an inherited or inborn predisposition and of external factors in the etiology of a given disease, whether it be tuberculosis or something else, can best be settled by investigation of twins. If it be found that monozygotic twins are in general both affected, and that in dizygotic twins as a rule only one is affected, then a hereditary or germinal factor in the etiology of the given condition may be considered as established. Such a factor would not necessarily manifest itself in some demonstrable peculiarity of physical build or psychic constitution. It may consist, instead, of some chemical, metabolic, or immunologic peculiarity, or the nature of it may be difficult or impossible to ascertain. Nevertheless, such a distribution of the affection in monozygotic and dizygotic twins as I have referred to would definitely establish the existence of a hereditary or germinal factor.

Unfortunately this type of clinical material is not easy to find in amounts adequate for statistical treatment. As far as I know, only one fairly extensive study of such material has been reported in the medical literature, namely, a German study by von Verschuer, abstracted in *The Journal of the American Medical Association* of August 9, 1930, on page 427. That study is based upon investigation of seventy-five pairs of tuberculous twins, among which nineteen pairs were monozygotic twins. It would appear from that study not only that there is a hereditary factor in the etiology of tuberculosis, but also that such hereditary factor largely determines the exact extent and distribution of the tuberculous lesions in the various organs, regions, and tissues of the body.

Frederick Proescher, M. D. (San Jose).—The renewed interest of the medical profession relative to the correlation of physical constitution and disease readiness has occupied the attention of many investigators. Internists, surgeons, and psychiatrists have taken up the question as to whether or not there exists any relation in the physical make-up and the susceptibility to certain diseases. The relation of the susceptibility of tuberculosis and physical constitution especially has been in the foreground of medical interest.

The introduction of exact anthropologic measurements and modern statistical methods have replaced former vague, clinical descriptions and established firm bases for comparing the results of different investigators.

The very careful and critical investigations of Doctors Jones and Bogen have failed to demonstrate any peculiarity in either the physical or psychic make-up of patients with tuberculosis as compared to patients with active, progressive tuberculosis. Their results are in accordance with Eisenstaedt's investigations, but Ickert, by exact anthropologic measurements, found that from 48 to 64 per cent (nearly 80 per cent if mixed forms were included) of the tuberculous population of East Prussia were of leptosom habitus, as compared with the entire population of which from 14 to 15 per cent were leptosoms. Luxemburger, by exact statistical methods, has shown that there exists a close correlation between leptosom habitus, schizophrenia, and tuberculosis. Even when taking into consideration the unfavorable living conditions of these patients, this correlation exists. A comparison of the tuberculosis mortality (considering different age classes) of parents and children of schizophrenics, as compared with that of manic-depressives and the average general population, the schizophrenic families showed a much greater tuberculosis mortality. From the analysis of his cases, Luxemburger concludes that the susceptibility of tuberculosis is closely related to the leptosom habitus and the schizophrenic "anlage" (factor coupling) and is recessively inherited.

The results of Coerper are also of great interest. He investigated eleven tuberculous families where the parents were of different physical and mental types, and where either one or both were suffering from tuberculosis; all of the children were infected with tuberculosis. Children with like structure, either corresponding to that of the father or mother, showed the same clinical form of tuberculosis as the parent.

The most convincing proof of an inborn predisposition for tuberculosis has been established by Diehl and von Verschuer. They collected more than one hundred tuberculous twins and investigated the clinical course of the infection. The material was divided as follows: (1) Twins who exhibited exactly the same clinical form of tuberculosis or with only minor differences as to the appearance of the first definite clinical symptoms. (2) Twins with tuberculosis of different organs, and with great variation as to the length of time of infection and a variety of tuberculous lesions. (3) Twins where only one was manifestly infected with tuberculosis or where one had succumbed to tuberculosis while the other was not infected.

The percentage distribution of the monozygotic and dizygotic twins into the three groups was as follows: (1) M. Z., 69 per cent; D. Z., 21 per cent. (2) M. Z., 21 per cent; D. Z., 37 per cent. (3) M. Z., 10 per cent; D. Z., 42 per cent. In other words, the majority of the monozygotic twins showed a similar clinical course of tuberculosis, while in the dizygotic twins a discordance was apparent. They further found that with increasing age in the monozygotic twins the discordance became still less, while in the dizygotic it became considerably greater. They conclude that a hereditary factor is of great importance for the clinical course of tuberculosis and the distribution of tuberculous lesions in the organism.

These few quotations of the literature may suffice to show that the question of the relation of the constitution and inheritance to the susceptibility of tuberculosis is by no means definitely settled.

EVERY CHILD IS DIFFERENT

By WILLIAM PALMER LUCAS, M. D.
AND
HELEN BRENTON PRYOR, M. D.
San Francisco

DISCUSSION *by Harold K. Faber, M. D., San Francisco; Oscar Reiss, M. D., Los Angeles; Andrew J. Thornton, M. D., San Diego.*

OVERSTANDARDIZATION in many branches of child welfare has led to some mistaken conclusions as to what constitutes health. A common fault in constructing standards in the past consisted of collecting data on a series of children, finding the average or group tendency of some mental or physical trait and labeling this average "normal."

COMMENT ON SOME PRESENT HEALTH STANDARDS

Health standards now in use which do not recognize individual differences are poor. As an illustration, consider the widespread use of the height-weight-age tables in schools, public health clinics, and doctors' offices as a measure of nutrition in children. Too much significance has been attached to deviations from average weights for height and age. The usual belief among parents is that if a child is noticeably underweight, according to the height-weight-age table, he is necessarily malnourished. But the basis of this table is average weight for height and age.

It is impossible to label one weight normal for all boys or all girls of a given height and age because of their differences in body build. The height-weight-age table is a useful adjunct in measuring a child's nutritional status, but it must be considered as establishing average weight for a group, not normal weight for the individual.

WIDTH-LENGTH INDEX

Mathematical analyses have shown that body weight is more closely related to width of shoulders, chest, and hips than it is to height. Full details are given in Doctor Franzen's[1] monograph. Children inherit a slender or stocky or intermediate type of body build from their parents and are heavier or lighter than average in exact proportion as they are broader or slenderer than average for their age. We have worked with a width-length index which measures the relative breadth or body build of a child. Many elaborate methods of classifying body build have been worked out, but the very simple way of merely comparing width to length of body appears to be adequate.

The widest diameter of the crest of the pelvis divided by the height yields an index of build, which we have studied in relation to body weight.[2]

This width-length index increases directly with the relative breadth of the child, since it expresses the simple relationship of each body to itself. Empirically, it can be said that a low index means a slender child with small bones, and a high index means a broad child with large bones. Calculating the width-length index measures the amount of variation from the height-weight-age table averages that should be allowed for body build before diagnosing overweight or underweight. If a child's width-length index is small he should weigh less than the height-weight table indicates, and if his index is large he should weigh more than the table indicates.

Obstetrical calipers or anthropometric spreading or sliding calipers may be used to measure diameters. No other special equipment is necessary and the time required to calculate the index is very small. Measurements should be taken with firm pressure on the skin.

EXAMPLES

Each child has a normal weight, which can be calculated for his build. For example, an eight-year-old boy was 52½ inches tall and weighed 57¼ pounds. His "normal" weight, according to the height-weight-age table, was 63 pounds; so he was labeled 9 per cent under weight by the school nurse. However, he was a slender-built boy with narrow diameters, and the ratio of the width of his body to his height shows he was 5½ per cent narrower than the average eight-year-old boy in his social group. Ideal weight calculated for his particular bony framework was found to be 59½ pounds. He was then found to be 2¼ pounds below his ideal weight.

A six-year-old boy was 44 inches tall and weighed 48 pounds. His "normal" weight on the height-weight-age table was 44 pounds; so he was labeled 9½ per cent overweight by the school nurse. But this boy was broad built, with large diameters, and the ratio of the width of his body to his height indicates that he was 7 per cent broader than the average six-year-old boy in his social group. His ideal weight for his body build was found to be 47 pounds, so he was actually one pound over his ideal weight.

A table of average indices by age and sex, computed from measurements of 1010 boys and 922 girls, is presented to show the basis of our calculation of normal body weight for build. Consideration of diameters or width measurements to arrive at proper weight for build is not new, having been described by Gray,[3] Franzen,[1] Bakwin,[4] and others, but the method of measuring the relationship of these width measurements to weight, as published two years ago, is new and has this very practical application.

SCHOOL REPORT PROCEDURES

Many physicians are now studying the individual from the standpoint of the kind and amount of his variation in any given trait from the aver-

TABLE 1.—*Table of Mean Width-Length Indices by Age and Sex.*

The width-length index represents the width of the crest of the ilium in per cent of standing height $\frac{\text{bi-iliac diameter}}{\text{stature}} \times 100$. It measures the relative breadth of the body. This table is based on measurements of approximately 2000 San Francisco children.

Age	Male	Female	Age	Male	Female
0-1	173	175	9	158	159
1	168	172	10	158	160
2	167	171	11	157	161
3	166	166	12	157	162
4	162	163	13	156	163
5	161	161	14	155	163
6	159	159	15	155	164
7	158	159	16	154	164
8	158	159			

age figure for a group of similar age and environment. For example: Faber,[5] Draper,[6] and Pearl.[7]

However, at the present time, health reports sent home from the public schools at regular intervals inform millions of parents in America that their children are under or over "normal" weight. In the case of the child labeled overweight little is done unless he is very markedly overweight, when his parents may limit his diet somewhat. But in the case of the child labeled underweight the parents often become very much concerned and institute a program of high calorie, high-fat diet, additional meals, and forced feeding.[8] This whole program is open to criticism. The mental attitude of the parents in their great concern may react negatively on the child, causing him to lose his natural desire to eat. Forcing food upon a child who does not need it may upset his digestive processes and may end in open rebellion. If a mother urges her child to eat some particular food because it is "good for him," he may come to believe that his eating is a very important thing in the life of his mother. His natural reaction, then, is to use this new-found power of unwillingness to eat as a method of self-assertion. Lack of hunger, then, may become a psychological attitude of negativism against eating developed by an overconscientious mother who forces food in obedience to some artificial standard. Recognizing different food requirements in children of different types, coupled with a knowledge of child psychology, will solve most problems of anorexia.

APPLICATION TO ANIMALS

In the animal world we recognize physical differences and feed according to type.[9] To borrow an illustration that carries the argument to the point of absurdity, suppose we should construct height-weight-age tables for dogs. We should, then, put the heights and weights of the pekinese, terriers, collies, great danes, and Saint Bernards all together and find the average which we would label normal. Then we would stuff the little pekinese and terriers and starve the great danes and Saint Bernards in our effort to make them all conform to our "normal" standard. The collies and other middle-sized dogs would just fit the standard and would thrive on the "normal" diet, but the dogs that were too large or too small would suffer.

CONCLUSIONS

A child should not be allowed to compare himself with bigger and stronger children on health ratings. An inferiority complex on health is as bad for a child as any other form of inferiority complex. The modern objective has been changed from an attempt to make all conform to an attempt to enable each to develop according to his individual capacities.

It is hoped that the simple method presented for calculating normal weight for body build may prove to be a practical application of our knowledge of body build in its effect on weight.

490 Post Street.

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DISCUSSION

HAROLD K. FABER, M. D. (Stanford University School of Medicine, San Francisco).—That the single standard of weight for height adopted widely and uncritically for measuring nutrition of children, especially in the schools, was almost certain to lead to serious misinterpretation and abuse, because of probable failure to recognize the importance of individual variations from a rigid norm, was foreseen by students of the measurement method almost from the beginning. In spite of warnings issued then and at frequent intervals since then, many school workers continue to compare individual children with these rigid standards and to warn parents that their children are underweight or overweight when they vary but slightly from the "normal" figures. Some six years ago I introduced what I hoped was an improvement on the Baldwin-Wood scale—a scale based on some 60,000 measurements of California school children, showing not a single standard but a range of weights for each inch of height, year of age, and sex—and on the printed table a warning was given that not even those children whose weights were not within the given range should be necessarily considered as abnormal, but merely in need of a medical check-up. The range given was intended to take care of the variation due to differences in constitutional type, or body build, without necessitating more measurements than were already being made or increasing the amount of work required by the teachers or school nurses. Even with these more liberal allowances and with the avoidance of comparing a child's weight with a single "standard" weight, the trouble was merely somewhat abated but not entirely removed. Children are still being reported from the schools as under or overweight when in fact they are neither.

The physician who sees such children in his office can correct the error either by exercising his commonsense, that is, by making a visual appraisal of the child's build and amount of body fat and on that basis an estimate of his nutritional state, or if he wishes to have a more objective measurement he can use the excellent method popularized by Doctors Lucas and Pryor—that of measuring width in addition to height and weight. The method is sound in principle, does not involve too much extra effort, and is quite practical. It is to be hoped that even with this method, however, a suitable allowance for individual variation will still be taken into consideration. It may be mentioned here that the thickness of body fat can be very simply measured by an excellent little calipers designed by Franzen. This measurement is of considerable value, since one of the chief aims of objective measurements of the nutritional status is to determine how much body fat is present.

The authors of this paper deserve our thanks for a contribution that merits serious attention.

OSCAR REISS, M. D. (1930 Wilshire Boulevard, Los Angeles).—The wide publicity given to height-weight-age tables as representing a correct index of nutrition has proved most unfortunate, for it has led far too many to believe that each individual child could be so developed as to reach "the average" established by these tables. And most parents wish and even believe it possible that their children can be made to reach above this average.

How firmly this notion is implanted in the lay mind is forcibly brought to our attention times without number. Hardly a day goes by but that one or more anxious parents appear in our offices imploring us to transform their perfectly fine but thin children into fat ones who will equal or surpass "average weights." How much of our time must continue to be spent carefully explaining that "every child is different," that there are hereditary limitations which cannot be overcome, and that a sense of well-being on the part of the child plus good muscle tone and tissue turgor, active response to environmental stimuli, good appetite and sleep, are far better indices of the nutritional state than conformity to height-weight-age tables.

Lucas and Pryor, in their paper, present a very simple and excellent method of classifying children according to inherited types of body build and by this means offer us a rational way of estimating the nutritional state.

The title of their paper sounds a truth that should be broadcast to all parent-teacher organizations, to all public health and school nurses, as well as to all associated with child-caring institutions.

*

ANDREW J. THORNTON, M. D. (3235 Fourth Street, San Diego).—The standard chart of weight for height and age of children has been most unsatisfactory. The modified chart that takes into consideration the tall slender, the short stocky, and the average types has also been unsatisfactory. Therefore I welcome most heartily this paper by Lucas and Pryor, which suggests a way out of our difficulty.

In order that this new method of computing child nutrition may become practical and usable in our everyday work, it seems to me that a more simplified method of application will have to be worked out.

The general practitioner or the school nurse is not going to bother with a problem in decimal fractions in order to send home a report about a child, and these are the persons who are keeping the mothers of the country stirred up with their reports about underweight or overweight among school children.

I shall be greatly interested in further developments along this line.

VETERAN HOSPITALIZATION PROBLEMS*

By WILLIAM H. GEISTWEIT, JR., M. D.
San Diego

WHEN prosperity reigned and money was plentiful, taxes were just "one of those things"—an annoyance and a necessary evil. When business was booming, merchants and the professional classes had all the business they could handle; so loopholes in business, taxes, or paternalism in government were just incidents and nothing to worry about.

THE NATIONAL BUDGETS

But today the entire picture has changed. We find the entire national income has decreased from $85,000,000,000 in 1929 to less than $50,000,000,000 in 1932, a drop of more than 40 per cent. Contrasted with a vastly lowered income, nationally and individually, our tax bill has mounted until today it aggregates $10,250,000,000 for the federal, state, county, and municipal governments. Thus, in effect, every American works one day in every five, or sixty working days a year, to pay his taxes.

The picture up to this point affects every property owner and taxpayer. In this changed condition the medical profession has been as hard hit as any profession or business in the land. But from this point the brush begins splattering the medical profession, for the private practitioner not only pays his share of taxes, but a considerable amount of his tax money is used in financing government competition with him.

PRESENT COSTS OF THE CARE OF VETERANS

Witness: In the present budget there is an appropriation of $48,000,000 for hospitalization, domiciliary and medical care of veterans, and an additional $12,877,000 for hospital construction. By far the major portion of the first-named item is admittedly for the care of veterans whose injuries or diseases are in no way traceable to their military service.

EXTENSION OF CARE TO NONSERVICE DISABILITIES

The government's veteran disability policy, starting with the very proper care and treatment of those actually wounded, disabled, or sickened while in service, has been liberalized until it now includes hospitalization of men whose physical ills develop at any time, now or in the future. The result is that today the government owns and maintains 114 hospitals and domiciliary homes of which 69 are under the direction of the Veteran Administration, with 58,700 beds.

The menace of this liberal policy—the most surprisingly liberal in all history, as it pledges the government to perpetual care of the physical well-being of the veteran—not only to the treasury and taxpayer but to the medical profession, is evidenced by estimates of the medical council of the Veteran Administration that by 1950 there will be necessary 129,859 beds to care for the peak load of nonservice cases. This will involve, according to estimates based on present conditions, a cost for additional hospital construction of from $160,000,000 to $200,000,000, with an annual treatment cost of $140,000,000. Embraced in this statement is the thought of a corresponding loss to the medical profession and private hospitals.

Authorities estimate that if nonservice-connected cases are eliminated, instead of more construction being necessary, there would be an excess of 40,000 beds when the already authorized hospital building program is completed; and that it would be possible to close enough hospitals to save $30,000,000 in overhead alone. On October 31 last, there were but 29,106 service-connected cases occupying beds in hospitals administrated by the Veteran Administration, the remainder, of course, being of nonservice disabilities or diseases.

* From the office of the secretary, San Diego County Medical Association.

THE MEDICAL PROFESSION AND THE GREAT WAR

No group suffered more than the medical profession during its war service, so no one can accuse it of lack of sympathy for those who fought and were disabled thereby. But the profession is unalterably opposed to governmental care of nonservice-connected disabilities, especially when the veteran is able to pay his way. What is just for the veteran is just for the civilian who saw no service. If competition with the medical profession and the hospitals on the part of the Federal Government is just, then the grocer, the clothier, and all the rest should be subject to the same treatment. The mere fact that a man did his duty overseas does not warrant perpetual care by the government while the man is neglected who performed the necessary civilian duties at the home base or who because of age, disability, or lack of opportunity for duty could not serve. The veteran with service-connected disability might receive a more just compensation for his blighted career if his comrades discharged unscathed, especially those able to pay their own way, were not putting the whole veteran group in a bad light by demanding free care.

EFFECTS UPON HOSPITALS AND MEDICAL PROFESSION

The effect of one phase of this policy on the medical profession and the nation's great private hospital business of more than 2,000 institutions, as well as a suggested road out, constructively planned, is succinctly told in a nonprofessional publication, *The Saturday Evening Post,* which, in an editorial in its January 7 issue, said:

> Hospitals throughout the country are feeling the cramping effect of current conditions more severely than almost any other class of institutions. Even in good times they are run at a loss and must look to charitable citizens and to local welfare organizations to meet their deficits. This winter they are under pressure to give more free service than ever, with fewer paying patients to offset their costs.
>
> Medical men, even those with large practices, are feeling the pinch of poverty, for they report they are collecting only from 10 to 20 per cent of their bills. Doctors and surgeons may starve, hospitals may go broke, but such are the traditions of medicine that the sick must be cared for at any cost.
>
> Our hospital situation is becoming more and more grave. Only five-eighths of our existing accommodations are being used. More than three-eighths of the available beds—38 per cent, to be exact—are empty. In the face of those conditions, Congress, with its unfailing genius for devising new ways in which to spend other people's money, threatens to make them worse by building all over the land elaborate and costly hospitals for the care of sick and disabled veterans.
>
> Such a course is as detrimental to the best interests of the veteran as it is to sound public policy. Already there have been bitter complaints from the mothers of veterans that their boys have been sent to hospitals so far from home that it is impracticable for their families to visit them. Such complaints are well founded. They will multiply in proportion as the practice becomes more widespread.
>
> Veterans are entitled to care as near home as hospital facilities permit. It is manifestly unfair to send them to distant medical centers for treatment when they can be given as good care among friends and neighbors, where their families can visit them without inconvenience or expense and where they can still have some share in home-town affairs. Local hospitals are local enterprises and they are usually sponsored by the best element in their communities. The government, instead of setting up destructive competition with these quasi-charities, should utilize their vacant accommodations and pay a fair price for the service rendered. Such a policy would be of interest to veterans and would react favorably upon struggling institutions from coast to coast.

That is just half the story. The other half is effectively stated by Dr. Thomas W. Bath of Reno in a report to the Nevada Medical Society from its Military Affairs Committee, in this wise:

> There can be no other interpretation to the work of the Veterans' Bureau than to class it as in the business of state medicine. State medicine is an affair which every group of ethical men and women in the practice of medicine or nursing is vigorously fighting today. Every sick soldier or nurse has the supreme right to call to his bedside such physician or surgeon as is his or her choice.
>
> Under the present plan the government is entering into business in direct competition to today's number of 156,440 physicians and surgeons, not to speak of tens of thousands of nurses. The government's bureau is attracting to itself a medical and surgical clientele from over 4,000,000 people, thereby taking away from the legitimate earnings of thousands of physicians, surgeons, and hospitals.
>
> In addition, let me point out that the present hospitalization is ineffective, despite its liberality, because acute cases cannot be as quickly and efficiently handled in government hospitals, scattered as they are throughout the land, as in local, private hospitals in the very community where the case originates.

Now back to the principal thought—the cost of all this present paternalism of the government.

The plan of hospitalization and medical care today costs every family in America at least $10 a year, and if outlined plans are approved the cost will be tripled. As expressed in Doctor Bath's report in the December CALIFORNIA AND WESTERN MEDICINE, page 370:

> But we must not consider that this tax would be spread upon a pro rata or general average; for it is estimated that 3 per cent of the population of the United States pays the bulk of the government tax, while 12 per cent of the population makes up the entire remainder.

Thus the battle of the budget, now being fought out before congressional committees in Washington, has an importance to the taxpayer, and the physician taxpayer, never before attached to such hearings.

NATIONAL ECONOMY LEAGUE [1]

Directing this battle for the taxpayer, and incidentally for our profession, is the National Economy League, whose representatives have already demanded a budget cut of $450,000,000; a change in the method of hospitalization; and the complete halting of hospital construction plans. This organization is fighting the good fight for the whole country, for the very financial stability of the nation, because taxes even now are so burdensome that hundreds of thousands of property owners have defaulted. What will it be when new taxes are needed not only to balance the budget but to meet the new raids on the treasury contemplated by the politicians who in many instances are utilizing the veterans for selfish aggrandizement?

[1] Concerning the National Economy League, see California and Western Medicine, December, 1932, page 425.

ACTION OF THE SAN DIEGO COUNTY SOCIETY

The San Diego County Medical Society, of which the writer of this article is secretary, fully realizes the principles embodied in this battle, and believes that now is the time to organize and make articulate the entire profession and the taxpaying public in order that the problem may be solved immediately and rightly. To this end the society is throwing its support behind the National Economy League, whose leaders embrace such distinguished figures as Newton D. Baker, Elihu Root, Alfred E. Smith, General John J. Pershing, Rear Admiral Richard Byrd, and Admiral Sims. To do otherwise is to court financial disaster for the country and the erection eventually of a real trust in state medicine, as opposed to the private practitioner and hospital. May I suggest a vigorous course of action by every medical society? [2]

233 A Street.

DOCTORS AND CLINICS

By C. L. MULFINGER, M. D.
Los Angeles

DURING the past two years economic aspects of the practice of medicine have received more attention in public discussion than at any time within the knowledge of the present generation. Various surveys have been undertaken—local, state, national, and even international—with a view of arriving at an accurate estimate of the costs of medical care. In these surveys special attention was paid to the remuneration received by the physician and to the cost of hospitalization and accessory expense to the patient. One thing, however, has been overlooked in these surveys, and that is, the amount of gratuitous services rendered by the medical profession. The briefly published reports of tax-supported institutions are much in evidence in these surveys, but little information is given about the numerous clinics which are privately supported and have staffs of devoted attending physicians who give freely and without public recognition of both their time and service to the care of indigent and near-indigent citizens.

PURPOSE OF THIS PAPER

This article may be regarded as an attempt to show briefly the amount of charity work done by attending physicians in seven of these privately supported clinics in the Los Angeles metropolitan area, especially pointing out the mounting figures of the last three years. For the purpose of making the report on this question reliable, a brief questionnaire was sent out to the ten largest privately conducted clinics in the Los Angeles area. Of these, seven answered the four brief questions which were submitted to them.[1] These questions were:

1. How many patient visits per year have you had in your clinics for the past three years?
2. How many doctor hours per year for the past three years?
3. Has the social status of your patients changed noticeably in the past three years?
4. What is the average charge per patient made?

The answers received were as follows:

I. CLINIC PATIENT VISITS

	1929-30	1930-31	9 months only 1931-32
Clinic No. 1..	51,932	57,166	70,224
Clinic No. 2..	2,399	8,250	8,513
Clinic No. 3..	10,357	12,694	16,453
Clinic No. 4..	34,104	35,964	43,844
Clinic No. 5..	23,225	23,225	23,225
Clinic No. 6..	26,815	28,628	30,898
Clinic No. 7..	71,123	90,946	115,000 estim.
	219,961	256,873	308,157

II. DOCTOR HOURS

	1929-30	1930-31	1931-32
Clinic No. 1..	7,616	7,616	7,616
Clinic No. 2..	No record		
Clinic No. 3..	No record	1,617 (ten mos.)	3,147
Clinic No. 4..	6,097	6,097	6,097
Clinic No. 5..	3,612	3,612	3,612
Clinic No. 6..	2,989	3,910	5,503
Clinic No. 7..	10,812	10,812	15,812 estim.
	31,126	33,664	41,787

These figures show an increase of clinic patient visits of 50 per cent in 1931-1932 over 1929-1930. For this increase in patient visits at the clinic there has been a corresponding increase in the number of doctor hours which amounted to almost 33 per cent.

MONEY VALUE OF THE SERVICES DONATED BY PHYSICIANS

Several years ago the Fee Schedule Committee of the Los Angeles County Medical Association estimated that the doctor's hour should be worth $12 to the patient. This was considered a conservative estimate. Taking this as a basis of calculation, it would follow that, in the seven clinics whose reports were submitted, the physicians rendered $501,447 worth of service to the general public in 1932; and if all the free or part free clinics in this area were included in our report there is no doubt that the sum of the service rendered gratis would mount up to $1,000,000 for the current year.

The lay public knows nothing of this service nor reads a public record of it. If some philanthropist or philanthropic organization were to give

[2] The Southern California branch of the National Economy League has just been organized, with headquarters at 548 South Spring Street, Los Angeles. Membership enrollments may be sent to that address or by telephone, Mutual 2289. Membership is without obligation, the organization being supported by voluntary contributions. Its purpose is to fight extravagance in all phases of local, state, and federal government. The matter discussed above is only one of its efforts. Additional facts and figures may be found in the American Medical Association Bulletin of November 1932, pages 199 ff., being abstracts from General Frank T. Hines' address, "The Major Problems of Veteran Relief." See also December, 1932, California and Western Medicine, page 425.

[1] A questionnaire survey of some Los Angeles clinics. The clinics whose social departments and directors have furnished the writer with the above facts are: All Nations, White Memorial Hospital Clinic, Santa Rita, Children's Hospital Clinic, Pasadena Hospital Dispensary, Orthopedic Hospital Clinic, and Eye and Ear Hospital Clinic. For their kindness and helpfulness the author wishes to express his gratitude. All these clinics are members of the Los Angeles Community Chest, with the exception of the Pasadena Hospital Dispensary, which is a member of the Pasadena Community Chest.

that much money to public charity, there would be ample display of striking headlines for the eye of the common man for weeks. There should be, therefore, no criticism of the Committee on the Costs of Medical Care when they suggested that physicians should be paid for services rendered to the indigent in each community. Directors of the clinics have made an approximate estimate that the physicians of the attending staff have each given up two weeks of time annually to serve the patients in their clinics.

COMMENT

It is the consensus of opinion among social workers and directors of philanthropic institutions that the social status of the patients seeking medical care in clinics has undergone a marked change within the past two years. One person who is directing an out-patient department in one of the local clinics has recently said: "In 1931-1932 we have noted fewer foreigners in our clinic. In their place we have 75 per cent of American laborers, men of the skilled labor class, such as carpenters, plumbers, auto mechanics, dependents of clerks, actors, musicians, etc." This statement bears out the truth of the experience of the social workers who gave the answer to question three in this report.

In the matter of clinic fees, the average charge is twenty-five cents for the first registration, and ten cents for each following visit. A minimum charge is made for x-rays, for laboratory work and for special dressings to those who can afford to pay. The cost of the average patient per visit to the clinic, where such estimates have been made, is from $1.09 to $1.79, which is considerably cheaper than the cost per patient visit in the out-patient department of tax-supported institutions.

To resume our conclusions once more, an enormous amount of medical and surgical work is being done gratuitously by the attending staffs of the nontax-supported clinics and out-patient departments of the Los Angeles area. Such work has received little or no public recognition in the lay press and was not considered in surveys of the costs of medical care.

It is questionable whether the medical profession will be able, in the face of the present economic trend, to give so full-heartedly as it has in the past of its time and support to these institutions without some form of pecuniary reward.

2014 Seventh Street.

ETIOLOGY OF INGUINAL HERNIAE

By PHILIP STEPHENS, M. D.
Los Angeles

DISCUSSION *by W. W. Roblee, M. D., Riverside; Gunther W. Nagel, M. D., San Francisco; C. Lewis Gaulden, M. D., Los Angeles.*

THE average patient coming into an office today for examination and advice wants to know the reason for his disease or disability, and the average consultant attempts to explain, or to set forth, a reason for the existing condition. In so doing, it appears that he is either careless or neglects to make the proper distinction between cause and effect. Especially is this true in the discussion of herniae with our patients in general and its influence upon the public, lay and legal in particular. There is at present such a marked confusion of ideas regarding the causes of herniae even among the rank and file of our own profession that it is little wonder that legal boards, judges, insurance companies, and compensation commissions have so many opinions and varied rulings, all more or less confusing and conflicting in the interpretation thereof. We are continually being asked by the various interested state and legal bodies for our opinions and should, without hesitation, freely express ourselves. Unfortunately some of us do not, and in view of this fact, I am finding my excuse for briefly reviewing the subject.

COMPARATIVE ANATOMY

It is easy to assume that hernia has always existed in man, and we are told that biologically it is the direct result of his assumption of the erect posture. In all vertebrates, except man, the chief support of the abdominal contents is the upper abdomen, the lower abdominal wall having within it the inguinal rings, so with the added gravitation and the necessary openings, the fact that man (due to his erect posture) is the only sufferer from hernia is easily accounted for. It is said that hernia almost never occurs in the four-footed animals in spite of the fact that many of them have open processus vaginalis peritonae. We are also taught that as a result of our assuming the upright posture, there is quite a difference not only in the arrangement of the abdominal contents, but a marked lengthening of the mesenteric attachment, permitting the descent of the intestine through the inguinal canal. In animals the mesentery is given off at a right angle to the spine or posterior parietes; in man it descends almost parallel thereto.

Inasmuch as approximately 90 per cent of all herniae are inguinal (although the increase of postoperative hernia has somewhat lowered this figure to 82.3 per cent) we will, in a measure, confine our discussion to this particular type, namely, inguinal herniae.

ANATOMY

A brief review of the anatomy of the sac, the canal and the contiguous structures is at this point necessary, along with something of embryologic physiology. The persistence of the patent funicular process in the male and the canal of Nuck in the female provides the potential hernial sac an escape of the viscera downward, into and through the rings. If we accept this congenital or sacular theory (and it is accepted generally) it is interesting to know that in the male the funicular process is larger and longer, and both rings—internal and external—in the entire inguinal canal are much larger, owing to the size, descent, and ultimate destination of the descending testicle in late embryonic life. After birth the increasing size, weight and mobility of the gravitated testes exert

a definite drag on the process in an outward direction, tending to definitely enlarge and elongate it. In the female the process, even though patent in the canal of Nuck, is adherent to the round ligaments and subject to backward pull by the weight of the uterus.

An abdominal wall, then, with a definite well lubricated canal (open funicular sac) leading from the abdomen to the scrotum, small as it may be and no matter how well guarded by muscular structures and by highly organized reflex nervous mechanism, is a potential hernia and might be compared to a well-constructed dam with a small canal, or fault, through which water trickles, which erodes and as time goes on, through necessary pressure from within, gradually enlarges, so that finally (and usually when there is a sudden surge or increase in this pressure) there is an actual break. And, obviously, the cause for the break is not due to the pressure the dam was unable to withstand, but to the original fault at the beginning of the structure built to withstand this calculated normal pressure.

One of our medico-legal boards of an adjoining state ruled as follows: "Medical science teaches now what it has taught for the past twenty years and is now accepted as a medical scientific truth and corroborated as such by the foremost surgeons and anatomists of the world, that is, that hernia, or so-called rupture, is a disease ordinarily developed gradually and is very rarely the result of an accident."

THE DEVELOPMENT OF AN INGUINAL HERNIA

A true traumatic hernia, or one that results from, or is actually caused by one single act of trauma, is extremely rare and a curiosity, and must be the result of direct or cutting violence and not the result of strain or muscular effort. That a rupture, or sudden descent of part of the abdominal viscera, may appear more or less suddenly and due to, or contributed to, by intra-abdominal pressure or strain, we are willing to admit, that is, if the canal is so faultily equipped anatomically and there has been a period of preparation through the usual continuous and long-applied impulses of intra-abdominal force. That herniae appear most often in the laboring man subjecting himself to daily strain is not surprising, especially if we find this individual with a poor muscular support in the lower abdominal quadrants. Certain positions in exercise and labor predispose to the rather sudden appearance of the tell-tale tumor at the external abdominal opening, or within the canal. In going over a number of cases in which we have personally taken the histories, we are impressed with the fact that position is quite a definite factor when associated with strain. A strenuous pull, or push, with the feet and legs widely spread apart—the same effort with one foot on the ground, the other placed higher up and braced against a wall—clinging to a pole or braced in a tree with the thighs well apart and the body in a strained, twisted or awkward position while attempting to disentangle wire or line—have all been noted in my histories. In attempting to determine whether my observation of this position and its frequent appearance in my histories has any actual anatomical and physical bearing on the case, I find that the theory advanced by Keith in his so-called "Shutter theory," is fairly applicable.

While we are willing to admit that a preformed sac is not a hernia, the protrusion of the viscera into the sac predisposes to its formation, and it is some form of intra-abdominal pressure in the form of repeated strain which finally forces the viscera into the sac. Keith seems to reject the sacular theory and offers an explanation of the actual protrusion as the result of a strain. He describes the contractile, conjoined group of muscles of the lower abdomen as acting under reflex nervous mechanism against the Poupart's ligament in the manner of an inguinal "shutter" which serves to close the area of actual or potential weakness. Failure of the shutter to act quickly during abdominal strain may permit the hernial start or actual protrusion. In my opinion, this is augmented by the position of extreme abduction of the thighs, that being the position in which the shutter effect of the support of the lower abdominal quadrants is least effective.

Much depends also upon the character and length of the patent processus vaginalis when we consider the length of time necessary for the hernial development—the size of the hernia and the distance of its descent toward the scrotal sac. A short, small sac in a well-muscled individual will develop a small bubonocele, where the large, long type admits of more viscera and descends eventually to the scrotum. This process, however, is of necessity slower and is the result of a long period of simple strains incident to daily life. The incipient hernia gradually extends obliquely downward, enlarging, lengthening and thickening the sac into which more viscera is being crowded.

Coley-Mock and a group composed of representative surgeons and anatomists, all maintain that a hernia actually exists at birth and requires years to develop and is actually a congenital condition—never the result of a single increase of abdominal pressure. They justly contend that the so-called hernia of effort, due to long and continuous physical strain, always occurs in the congenitally deficient abdominal support.

RELATION TO INDUSTRIAL ACCIDENT RESPONSIBILITY

The surgeon or the practitioner who is consulted by a patient regarding a hernia should give the patient and himself the satisfaction of eliciting and recording an accurate, intelligent, and honest history as to its occurrence. Too often the history consists of, "I lifted something, or at least I must have lifted something several days ago and this morning—or last Saturday night when bathing—I noticed a lump." Later, when medico-legal complications arise, this history is added to and extracted from until the story fits the "one act of trauma" as described, the bolstered-up history

saddles the responsibility for hospitalization, surgeon's fees, and indemnity on some responsible financial agent and all is smooth. The surgeon knowing, or at least feeling, that he is not altogether guiltless, salves his conscience by thinking that he has given the poor working man the benefit of the doubt. The responsible party, or employer, is content to be able to unload the responsibility onto the insurance carrier feeling that he has paid for just this relief, and the carrier realizes that (in spite of the many wise, just, and scientific opinions which he has introduced as evidence) he is called upon to shoulder the expenses involved and assume the entire responsibility.

We will all agree that a traumatic hernia is extremely rare, usually occurring by direct violence and with definite tissue destruction, and that it may always be accepted as accidental without question.

THE OCCUPATIONAL HERNIA

The so-called effort, or occupational hernia, is the type which is always in medico-legal controversy and, as regards this condition, we should take a definite stand in the way of education of the lay bodies.

If the employer is to be made responsible for the herniae developing in his employees during the course of their employment, he should demand a physical examination before employment. In the larger corporations this is done; consequently when a hernia does occur during the period of their employment the cost involved in its care is accepted without demur. As a consequence, the smaller concerns which do not have, or cannot afford a physical examination for employees, get the "lame ducks" or rejections from the large corporations and the burden is placed where it least should be borne.

The whole problem as to the ordinary, indirect hernia might be properly settled by our industrial accident commissions accepting all as accidental, or accepting none which, from the standpoint of economy and legal controversy, would at least be a benefit or improvement over the present status of the question.

We thoroughly concur in the conclusions of Coley, Leigh, Walker, Hopkins, and Hutchison in their American Railway Association investigation and report on the subject. Their report ends with the following:

"What, then, is the remedy? The only thing needed to bring about greater harmony in the procedure of industrial commissions is to spread broadcast a clearer knowledge of the well-known medical and surgical facts relating to the etiology of hernia. We must recognize that medical and surgical truths permeate but slowly, especially when they have to overcome long established traditions too often supported by court decisions. The first is to convince the commissions and the courts of the well-established surgical fact that hernia is a disease and not the result of an accident. When this has been done a radical review of the present state laws regarding compensation in cases of industrial hernia will be forthcoming.

RECOMMENDATIONS

1. Render proper compensation for all cases of true traumatic hernia due to direct violence.

2. Make a physical examination of all applicants for positions in industry, no matter in what capacity. Such examinations will determine the fact whether or not a hernia was present at the time of examination.

3. Any case of hernia developing in the course of duty, incident to the man's daily work, should be treated as a disease due to special anatomical weakness on the part of the individual, for which the company is in no way responsible. If it is considered wise under certain circumstances to recognize any moral responsibility, let it be on an economic or humane basis. This moral obligation should be understood to be strictly limited to such employees who had been found apparently free from hernia at the time of previous physical examination.

1136 West Sixth Street.

DISCUSSION

W. W. Roblee, M. D. (Glenwood Building, Riverside).—When the responsibility for disability due to industrial injuries is placed upon the employer or his insurance carrier the decision as to just what constitutes an injury becomes a pertinent and often a controversial point. This has been especially the case in regard to abdominal herniae. The insurance carriers soon learned of such opinions as that expressed by Coley-Mock, as quoted in this paper, to the effect that hernia always occurs in the congenitally deficient abdominal support, and for that reason they refused responsibility in all cases except those associated with direct trauma. The ailing employee, on the other hand, could frequently point to many years of activity in his employment with no pain, lump, or, at least to his untrained senses, to any other evidence of hernial protrusion, until at a certain day and hour while at work he felt something give in the groin and a sensitive palpable lump became evident. As pointed out by Doctor Stephens, many preëxistent herniae were twisted by a distorted history into the traumatic class and, on the other hand, meritorious cases were refused treatment.

The embryologic, anatomic, and physiologic facts brought out in this paper, and the resultant conclusions of the essayist, cannot be questioned, but the practical question remains as to what decision shall be made as to responsibility in these cases. In my opinion, the intent of the Industrial Accident law is that every disability in industry caused by accident shall be cared for by the industry and the man be returned to it as fit as before the accident or suitably compensated therefor. There are many of these border line or controversial conditions; for example, hernia, hyperthyroidism, neurosis, etc. There will continue to be this honest difference of opinion in regard to responsibility in these cases until provision is made for physical examination prior to employment. If physical disability is found the workman should then either be refused employment or disability waived on that point. Having been employed the workman should then be protected by a most liberal interpretation in these border-line cases.

✲

Gunther W. Nagel, M. D. (2000 Van Ness Avenue, San Francisco).—It is generally recognized that the majority, if not all, herniae are congenital in origin. It is probably often true that a man may first discover the presence of a hernia following some unusual muscular effort, just as a woman may discover a lump in her breast following a blow. It is not a simple question of cause and effect, as assumed by the patient, but the discovery of a preëxisting condition as a result of attention having been called to the part.

I agree with Doctor Stephens that we should be much more strict in our diagnosis of hernia due to

industrial injury. A lot of false notions regarding hernia have spread among employees of industrial concerns and these must be corrected by statements of the underlying cause of hernia and just decisions on the part of surgeons and of industrial referees.

❋

C. Lewis Gaulden, M. D. (326 Rives-Strong Building, Los Angeles).—Since the advent of the Workmen's Compensation Act the cause of inguinal hernia has ever been a topic of discussion. The pendulum swings first one way and then another. This should not be the case, as anatomy and pathology remain the same and do not change as do politics or religion. The term "rupture" is a misnomer and should be discarded.

Oblique inguinal hernia is due primarily to a congenital defect, and is not caused by any one act of violence, and comes on gradually. The defect is present, and anything that increases intra-abdominal pressure will tend to force abdominal contents into the waiting receptacle. Suppose, for instance, that it required one hundred acts of increased intra-abdominal tension to force a small amount of omentum into a preformed hernial sac; suppose, further, that ninety-nine of these acts consisted of coughing, sneezing, or straining at stool, and the hundredth act was due to lifting. Should the hundredth act be said to have caused the hernia? Absolutely not!

Section 3, Subsection 4, of the Workmen's Compensation Act states in part as follows:

"In case of aggravation of any disease existing prior to such injury, compensation shall be allowed only for such proportion of disability due to the aggravation of such prior disease as may reasonably be attributed to the injury."

It is only into this category that oblique inguinal hernia could possibly fit. How can one cure an aggravation of a hernia without curing the hernia itself?

I do not attach great importance to a medical examination for ruling out a hernia or the predisposition to the same. A small oblique hernia may be present at one time and absent another. No one can diagnose an empty preformed hernial sac. The proportion of hernias showing up in employees examined does not differ greatly from those unexamined. Of course the large complete hernias could be excluded by examination, but aside from this nothing is to be gained.

THE DOCTOR OF TOMORROW*

By A. Gatewood, M. D.
Chicago, Illinois

IN order to limit my remarks, I think it would be well to define my subject, "The Doctor of Tomorrow." According to Webster, a doctor is one skilled in a profession or in some branch of knowledge. Naturally, by *doctor,* I mean not those skilled in the practice of "pathies," of which I understand you have so many, but one skilled in *medicine.* And *medicine,* as Vaughn has so well put it, "consists of the application of scientific discoveries to the prevention and cure of disease. All else which may go under the name of medicine is sham and fraud." . . .

In order to learn what my colleagues thought of the doctor of tomorrow, I asked several of them in my best Socratic fashion, "Do you want your boy to study medicine?" Dr. K. answered in his typical brusque fashion, "Not if I advise him. I don't want my boy to slave as I have done the past forty years. I'm going to make a banker of my boy."

Dr. P. unhesitatingly replied, "What! and starve to death? Doctors of the next generation will be paid a mere pittance by the state. All ambition will be stifled. I should say not!"

Dr. O. answered, "Yes, it's in our family blood and I'd like to see him carry on if he is so inclined. I think medicine has a great future. I envy him the opportunities of tomorrow."

And so at once it became evident to me that there are so many phases to the subject that I dared inquire no further. The economic future seems to be the one most discussed, judged by the comments of the medical journals, the heated discussions in current magazines and the daily press. I would like to pass over this phase with one suggestion. If some of the well-meaning philanthropists and legislators would cease their troublesome meddling into medical economics and establish a few foundations for the more adequate remuneration of the hard-working physician or a pension fund for the doctor incapacitated in line of duty, as they say in the army, instead of devoting the funds to the care of broken-down cats or what have you, the medical profession would work out a sane solution of its problems.

Medicine has made more progress during the past fifty years than in its entire preceding history, due to mechanical aids to our five God-given senses. We probably are no better philosophers than Plato or Pythagoras. Our ability to reason is not superior to that of Archimedes or Hippocrates or Harvey. But Augenburger and Laennec have put tools into our hands which make it possible to explore the field invisible, while the modern sciences of physics and chemistry have opened the way to the ultimate solutions of the problems of bacterial disease, degenerative processes, neoplastic disease, senescence, and even of death itself.

The other day the Nobel prize was awarded to Warburg for the demonstration of the fact that a tumor cell generates more heat than a similar normal cell. Imagine, then, a process so delicate that one could place an instrument on the calvarium and say with precision, "Not a brain cell working," or "The patient in question has an early cerebellopontine angle tumor which can be successfully irradiated without the crude methods of our so-called refined surgery." The surface of scientific medicine has barely been scratched. It has been said that we are approaching the end of an era of the most rapid development the world has ever known. If that be so, we are entering a period in which the tools and methods for undreamed of progress are thrust into our hands with the injunction to "carry on."

I agree with Dr. O. The future of medicine was never brighter than today. The medical student as I see him in my classes is often wiser than the teacher. Few men on faculties are as well grounded in the fundamental contributory sciences as their students. It is more important than ever before that teachers and pupils should

* Abstract of some remarks made before the International Medical Club of Southern California, November 20, 1931.

* From the department of clinical surgery, Rush Medical College of the University of Chicago.

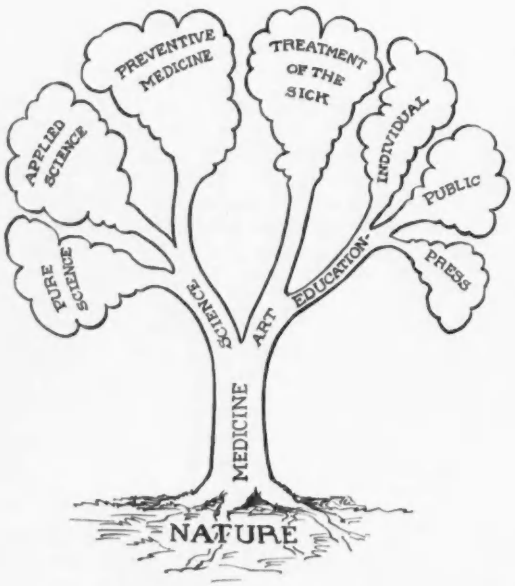


Fig. 1.—Tree showing source and outgrowths of the art and science of medicine.

regard themselves as overlapping. These students, our doctors of tomorrow, are possessed of an alertness equal to that of any of their predecessors, plus the advantages of a scientific age. In addition, they have been freed from the fetters of outworn theories. It is our duty to keep them free.

> "How happy is he born and taught,
> That serveth not another's will—
> Whose armour is his honest thought,
> And simple truth his utmost skill."

Like Elliot's octogenarian who read eight hours a day for seventy years, all to no purpose, it behooves us to direct the energies of our future doctors. The increasing complexities of modern life, the specialization in and out of medicine are bound to have their influences, but the industrial revolution through which we are passing cannot completely dissociate the art from the science of medicine. 'Tis true both spring from the same source, *Nature* (Fig. 1), and while they have many similarities, the likenesses in mental processes are at a variance too often overlooked in our present-day diagnostic and therapeutic methods. The art of medicine, which was dominant until about 1875, produced the doctor "who may have been awkward in handling test tubes but he was adept in handling patients." Due to the development of bacteriology and the application of modern physics and chemistry, scientific medicine has made more progress in the past fifty years than it had in the preceding fifty centuries, but too often it has failed to remember the age-old differences between mind and matter.

I have already said that both the art and the science of medicine spring from a single trunk. Today, however, medicine has grown into many branches no one of which may be lopped off. The art of handling the sick mind (and what mentality is not disturbed by even the slightest physical ailment) will assume its proper importance. Perhaps of no less importance will be the education of the public mind. Next to the scientific, the most outstanding trend of our age has been the democratic. The hope of democracy is in leadership. We look for such leaders in education, law, and business. We must have them in medicine. The public distrust of doctors, bred by ignorance, superstition and mysticism will vanish in the light of intelligent general medical education. No cult or *ism* can long thrive in the atmosphere of open competition with widespread dissemination of medical truths. The transformation of the attitude toward doctors from that of expert in emergency to that of exponent of prevention, is another important step in the education of the public mind.

I can only indicate some of the branches of the science of medicine along which our doctor of tomorrow may climb. The great majority of these men will carry on the altruistic ideals which are the intrinsic purposes of medicine, the alleviation of suffering and the prevention of disease. They might be compared to bridge-builders or construction engineers. There will also be a small group who will be interested in pure research, and whose scientific medicine might be likened to the study of physics as contrasted with the practice of engineering. These pure scientists may continue their cloistered existence, delving into the biological sciences for hidden bits of technical knowledge. The larger group, practicing applied scientific methods, will be no less investigators. Much remains to be learned in the field of applied therapy.

The third branch of the scientific limb of my medical tree is preventive medicine. When we consider how many diseases have been conquered before their actual etiological factor was even suspected, it is apparent that much still remains in this field. It seems to me, therefore, that specialization has widened our horizon rather than narrowed it, and I believe there is ample room for our doctor of tomorrow.

In conclusion, then, my conception of the doctor of tomorrow is:

First, that he will be better trained than the doctor of today in biologic sciences and in human understanding.

Second, that he will be an intelligent skeptic, always eager to dissociate scientific facts from moss-covered theories. By this I do not mean that he should not have imagination. Instead, freed of the handicap of fixed ideas, he can develop his imaginative reactions along scientific lines.

Third, with the rich heritage of the past, he will develop into a leader in the pursuit of the intrinsic purposes of medicine, the relief of suffering, and the prevention of disease.

Yes, I agree with Dr. O., the doctor of tomorrow has a glorious future.

> "Not in vain the distance beckons,
> Forward, forward, let us range—
> Let the great world spin forever
> Down the ringing grooves of change."

122 South Michigan Avenue.

THE LURE OF MEDICAL HISTORY*

HIERONYMUS FABRICIUS AB AQUAPENDENTE†

By S. L. MILLARD ROSENBERG, Ph. D.
University of California at Los Angeles

For out of olde feldes, as men seith,
Cometh al this new corn fro yere to yere;
And out of olde bokes, in good feith,
Cometh al this new science that men lere.
—CHAUCER.

¶

WHEN Adam's spare rib, the vertebra "Luz" (so valuable at the Resurrection), and other scholastic bones were live topics of early sixteenth century medicine, along came young Doctor Vesalius, prosector of the University of Padua, and scornfully swept them aside. The typical instructor of that day, in long robe and biretta, wand in hand, seated in his pulpit-chair, had been expounding Galen by the book while below him the barber made a dutiful attempt to demonstrate the viscera of the subject before him. Vesalius changed all that, substituting first-hand knowledge, recognition of palpable tissues by educated touch, practice of dissection *in situ*. Medicine thereupon turned away from Galen, and modern anatomy began. What an uproar there was, though, when in 1543 Vesalius published his *De Fabrica Humani Corporis!* He was but twenty-eight years old. Sylvius, his old teacher at Paris, turned against his brilliant pupil with coarse abuse; his own pupil, Columbus, derided him; some joined a conspiracy of silence; others, at the hint of the authorities, spread covert detraction. Open attack Vesalius sturdily met, but against stealth he had no weapon, and in a fit of anger he flounced out of Padua and went to Spain to accept a lucrative post as physician to the Emperor Charles V, who was eating and drinking himself to death. What fate might have befallen Vesalius if he had not left Padua, given up research and renounced anatomy, may be inferred from the fate of Dr. Miguel Servet, called Servetus, the great Spanish surgeon who discovered the heretical passage of the blood through the heart after mixing with

Fig. 1.—Reproduction of an engraving of the best known likeness of Hieronymus Fabricius of Aquapendente (1537–1619), who received his surname from the Italian city, Acquapendente, where he was born—a custom of that period which we recognize in such famous names as Leonardo da Vinci and Antonio Allegri da Corregio. The following is a translation of the inscription below the portrait:

Martial Rome doth vaunt Fabricius' name;
Thou, Aquapendente, gavest Fabricius birth.
The noble line thou to Fabricius, illustrious Rome, hast given;
And he in turn hath Aquapendente ennobled.

† Editor's Note.—The volume under discussion was one of a collection of rare medical books acquired years ago by Professor Rosenberg. The British Museum has a copy of this work, but the present volume contains some illustrations in seemingly better preservation than those in the British Museum folio. Doctor Singer of the University of London was particularly interested in the illustrations of the vein valves. The copy here discussed came into the possession of the editor of California and Western Medicine through Professor Rosenberg. It may add to the interest of this paper to quote from a letter of September 9, 1925, to the editor, in which Professor Rosenberg tells how he himself came to be the owner of the volume. Professor Rosenberg wrote as follows:

"In answer to your inquiry of last week:

"In the early summer of 1906, as Traveling Fellow of the Alliance Française of the United States and the University of Pennsylvania (I had won a prize in Old French, which was the Fellowship in question), I spent a couple of months in Ravenna, partly for sentimental reasons, partly because I felt that I might pursue there my Italian studies with greater profit, since the chance (or danger) of hearing much English there seemed somewhat remote. To further my quest still more, I decided to stop at the home of a school teacher, a man unfamiliar with any but his native tongue and, from now on, I was certain to hear the vernacular only. My host was an intelligent chap, however, and fond of old books in particular. One day he showed me a little library of early sixteenth and seventeenth century medical books he had recently obtained at public auction at Naples, where the effects of a physician who had died lately were thus disposed of. Of course, he had acquired them "for a song," so to speak. Practically all of them were quaintly printed and illustrated books on anatomy, or of particular diseases—all printed in Latin—the Fabricius among them. If ever I regretted being a poor student, it was at that time, for the teacher who, like all of us, was not particularly blessed in the way of things material, was not averse to selling his treasure at a price. He had an idea, to be sure, of the rarity of these books, but no real conception of their actual value. I was able, however, to secure about half of the collection, among which, I think, the particular gem was an early sixteenth century contemporary account of a plague of lues in Naples, spread among the populace by French troops (if my memory serves me right). That book—representing a type of the earliest printing and the queerest sort of illustrations—I hesitated to carry along on my travels, since I was yet to remain some fifteen months abroad, and I decided to mail it, registered, to my home in Philadelphia. It never reached its destination in spite of registration; it was lost, or stolen, in transit. The rest of the books—with the exception of the Fabricius, which again on account of the illustrations I was loath to dispose of—I distributed among my medical friends in the course of these twenty years.

*A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany Department of California and Western Medicine, and its page number will be found on the front cover index.

Fig. 2.—Frontispiece of *De Formato Fœtu.* Translation:
Hieronymus Fabricius of Aquapendente
on The Formation of the Fetus
Venice
[Published] by Franciscus Bolsetta
1600
Jacob Valegius, engraver. With privilege [license to print].

The book is divided into ten chapters, dealing, in the order named, with the veins and the umbilical arteries, the fleshy substance, the cotyledones, the chorion membrane, the allantois, the urachus, the amnion, the fibrous ligaments, and the internal parts to be noted in the fetus.

air in the lungs, and recorded the fact in his *Restitutio Christianismi* along with some theology which an unbalanced Frenchman by the name of Jean Calvin quibbled into a heresy sufficient to deserve the stake, at which he gleefully burned Servetus and his book.

At Padua, meanwhile, the ideas of Vesalius were being sustained by his pupil Fallopius, who expounded the new doctrine with vigor but with a tact that saved him from serious assault. At Rome, however, another brilliant discoverer, Eustachius, opposed Vesalius; for though Vesalius was personally out of the controversy, his great book *De Fabrica* was still dealing roughly with the old superstitions. It is not strange that so clever a man as Eustachius did not see the merit of the New Anatomy; such blindness is now and then illustrated in the profession today, though less strikingly.

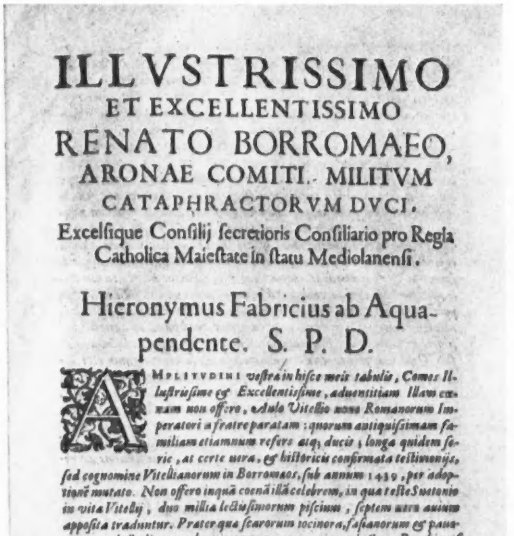
Fallopius, while bravely upholding his former master, was in his turn blessed with a devoted pupil, Geronimo Fabrizio—later to be Latinized as Hieronymus Fabricius—a native of Aquapendente, a little town in the Appennines. Let us glance at some of the startling events that occurred while he was still a boy, born in 1537. One of these was the hullaballoo over Vesalius and his *De Fabrica.* Fabricius was then six years old.

By a curious coincidence, it was in the same year of 1543, and in the same week of May, that the mighty Copernican heresy was published, in *De Revolutionibus Orbium Cœlestium,* wherein Copernicus described the revolution of the planets around the sun. Thus, within seven days of each other, Galen and Ptolemy became back numbers, and both medicine and astronomy began a new chapter. Copernicus fared better, personally, than perhaps any other dangerous heretic, for he did not live to hear any scientific criticism of *De Revolutionibus,* let alone hear the thunder of the Church. He was on his death bed when his book came from the press, and it is pleasant to believe the story that the first copy was placed in his hands while he was still in command of his faculties. Blessed by the consciousness of success, he breathed his last a few hours later, dying of intestinal infection and not Pro Hæretico Comburendo.

What else happened in astronomy is another story, but those were certainly great days in medicine, particularly anatomy and surgery. Closely following the *De Fabrica Humani Corporis* of Vesalius came, in 1545, the epoch-making work of Ambroise Paré, a French army surgeon, whose name should be blessed by every wounded soldier and civilian. Paré stopped the use of boiling oil as a dressing, and abated many other terrific practices which he had abundantly witnessed during his long service in the armies of King Francis I, the implacable foe of Charles V, whom Vesalius at that time was trying to save from a more formidable enemy, gluttony. Paré's methods are set forth in that great work, *Treatment of wounds made by arquebuses and other firearms and also by gunpowder burns,* an important contribution to surgery but only one of the many we owe to Paré, including his *Epitome* of the *Fabrica* of Vesalius, which made the work accessible to all surgeons.

A year later, in 1546, appeared Fracastoro's *De Contagione,* in which the modern theory of infection by microörganisms is stated with wonderful clairvoyance.‡ In short, medical advance was rapid in the middle of the sixteenth century, in spite of stiff opposition by State and Church and from within the profession itself. Medicine had not long been regarded as a profession, at least a respectable one, as shown in a decree of Charles V in 1548 in which surgery is declared to be honorable. This may have meant much to average medical men, but the real researchers had not waited to be told they were no longer outcasts from good society in the Holy Roman Empire; they had gone right on as if Charles were merely King of Castile. And they went on rapidly. We can glance but hurriedly at a few items.

‡ Compare, also, "Two Sixteenth Century Doctors on Syphilis and Guaiacum—Fracastoro and Ferri," by S. L. Millard Rosenberg, in California and Western Medicine, Vol. XXXV, No. 5, November, 1931.



ILLVSTRISSIMO
ET EXCELLENTISSIMO
RENATO BORROMAEO,
ARONAE COMITI. MILITVM
CATAPHRACTORVM DVCI.
Excelſique Conſilij ſecretioris Conſiliario pro Regia
Catholica Maieſtate in ſtatu Mediolanenſi.

Hieronymus Fabricius ab Aqua-
pendente. S. P. D.

AMPLITVDINI veſtræ in hiſce meis tabulis, Comes Illuſtriſſime & Excellentiſſime, aduentitiam illam cœnam non offero, Aulo Vitellio nouo Romanorum Imperatori a fratre paratam: quorum antiquiſſimam familiam etiamnum refero atq; duco, longa quidem ſerie, at certe uera, & hiſtoricis confirmata teſtimonijs, ſed cognomine Vitellianorum in Borromæor. ſub annum 1439. per adoptionē mutato. Non offero inquā cœnā illā celebrem, in qua teſte Suetonio in vita Vitelij, duo millia lectiſſimorum piſcium, ſeptem mira auium appoſita tradūtur. Præter quæ ſcarorum iocinera, faſianorum & pauonum cerebella, linguas phœnicopterum, murenarum lacteas a Parthia uſque fretoque Hiſpania per nauarchos & triremes petitarum, frater Imperatoris chariſſimus inmiſcuerat. Humanæ vitæ principia et rudimenta offero. Nec tantum humana, ſed & pleroruṁq; animantium, eorum ſaltem quæ a communi aliorum ratione diſcrepant. Quo quid præclarius, quid magis abſtruſum, quid mirabilius dici aut excogitari poteſt? Neronem ipſum Imperatorem ferunt (hoſtiæ forte rei admiratione captū) matris mortuæ cadauer inſpicere, & primum illud hominis domicilium, a quo ipſe prodiiſſet, contemplari voluiſſe. Nec mirum, ſi quid vnum eſt in tota natura indultum, ſi quid prouidum, ſi quid elegans, hæc omnia vno in fœtu efformando, nutricando, in conſeruando collocaſſe, videtur natura parens Deus. Vnde in hac erumpit Propheta: Celebrabo te Domine quia mirabiliter ſum formatus. Naſcitur tenellum & delicatulum embrio.

Fig. 3.—Translation of the first page of the Dedication of *De Formato Fœtu:* To the most illustrious and excellent Renatus Borromaeus, Count of Arona, Commander of the armored soldiery, Councillor of the Noble Secret Council for His Royal Catholic Majesty in the State of Milan, Hieronymus Fabricius of Aquapendente sends warmest greeting.

Your Excellency: I do not in these pages of mine, most Illustrious and Excellent Count, offer that banquet prepared in honor of his arrival for the ninth Emperor of the Romans, Aulus Vitellius, by his brother, of which emperor's very ancient family you are even now the representative and head by a long and indubitably true line of descent confirmed by historic proofs, though the name of the Vitelliani was by adoption changed, about the year 1439, to that of the Borromaei. I do not, I say, offer that celebrated banquet in which, by the witness of Suetonius in *The Life of Vitellius*, two thousand of the choicest fish and seven of birds are recorded to have been served up, besides livers of the sea-puffin, brainlets of pheasants and peacocks, tongues of flamingo, chitterlings of the moray eel, sought by the aid of shipmasters and triremes from so far away as Parthia and the Strait of Spain, were added by the Emperor's dearest brother. It is the foundation and rudiments of human life that I have to offer you. Yes, and not of the human merely but also of most animals, at least of those that differ from the ordinary structure of the rest. What more remarkable, what deeper, what more marvelous study can be described or invented than that? It is told that the Emperor Nero himself, taken perhaps with wonder at this very question, examined the body of his slain mother and showed a desire to behold that first home of man from which he had himself gone forth. And no wonder, for if there is in all nature any diligence, providence, or care, God, the Father of Nature, appears to have applied them all to the formation, nourishment, and preservation of the fetus alone. Wherefore the Prophet broke into speech thus: "I shall celebrate Thee, Lord, for that I am marvelously formed." The tender, delicate little embryo is born. . . .

In 1550 Hollerius prescribed spectacles for myopia. In 1552 John Caius of St. Bartholomew's, London, published his work on the sweating sickness. In the following year Servetus was burned, but not until he had made extraordinary contributions to anatomy. Friederich published his first tract on alcoholism in 1553; soon afterward Lange described chlorosis; Jacob Rueff's *De Conceptu* came in 1554, and a year later Pierre Franco performed suprapubic lithotomy; in 1558 Cornaro published his treatise on personal hygiene; Columbus in 1559 described pulmonary circulation; Stromeyer's treatise on ophthalmia appeared; then came Maurolycus with his studies of myopia, hypermetropia, and the optics of the lens; this was in 1560, the year Francis Bacon was born; the following year, 1561, was marked by the great Paré's work on orthopedics, Franco's on hernia, and Fallopius published his celebrated *Observationes Anatomicae.*

All historians agree that Fallopius took a great interest in his pupils and spared no pains to advance them. He soon formed a high opinion of young Fabricius and a warm attachment grew up between them. The young man matriculated, as we have seen, at a time of great mental activity in Europe, when a brilliant mind could not but be about some work, when the very air bore epidemic rumors that stung men to investigation. In every direction blew the incitement: over science, art, politics, religion; it had roused the preceding generation, and was to continue, in spite of Church and State and other vicissitudes, down to the present with increasing momentum. While Fabricius was studying under Fallopius at Padua, Tasso was writing the *Gerusalemme Liberata;* Michelangelo was planning the dome of St. Peter's; Benvenuto Cellini was working exquisitely in metal and stone and writing his inimitable autobiography; Palestrina was beginning modern music; Fuchs was devising a new botanical nomenclature; the momentous Council of Trent was in session; the Regius Professorship of Physic was endowed at Cambridge; in far Peru the University of Lima was founded; Elizabeth's reign began; the unrecorded youth of Cervantes was on its way to glory at Lepanto; Galileo was soon to be born, and, in the same year, Shakespeare. Great days! And Fabricius was of them.

His university, that of Padua, was governed by the student body, who even elected the faculty, whereas Cambridge, Oxford, Paris, and others of their type were controlled by the masters of arts. At Padua there were two separate corporations, each a university in the early sense; the corporations were called Universitas Juristorum and Universitas Artistarum, the latter including the faculties of divinity, philosophy, and medicine (not a bad juxtaposition, on second thought). During the medical session the whole human body was twice dissected in public by professors of anatomy; day was breaking when some of the lectures began and most of them were concluded by eight o'clock; Fabricius, when he became a professor, lectured at the more reasonable hour of nine.

Fallopius was but fourteen years older than Fabricius, and the two were fast friends, constantly together. After brilliantly passing his final examinations and receiving his doctoral hat, Fabricius often substituted as lecturer while Fallopius visited patients at a distance. This friend-

ship and collaboration was prematurely ended in 1562 by the death of Fallopius at the age of thirty-nine. Three years later the republic awarded the chair of anatomy and surgery to Fabricius, in his twenty-eighth year. For nine years he did not lecture, but limited himself to dissecting and operating before his classes. He was not alone in improving the methods of teaching; Oddi and Botoni, of the St. Francis Hospital at Padua, had already in 1558 made the first attempt in Europe at real clinical teaching; but Fabricius was to accelerate this advance. He built, with his own means, an anatomical theater, in which a hundred and fifty years later the great pathologist Morgagni worked; it gave place to a finer one erected by the Venetian Republic, which still stands; the seats are black with age, rising steeply in a semicircle; no daylight enters, the demonstrations were lighted by candles; over the entrance is an inscription commemorating the generosity of Fabricius in erecting the superseded building.

Fabricius had a large practice and drew, besides, from the Venetian Senate a salary of a thousand scudi, together with the right to wear a robe of purple and gold and the gold collar of the knightly Order of St. Mark; he was granted precedence over all other professors of the medical faculty. Like his master Fallopius, he was eager to serve his pupils and was loved for his kindness as well as admired for his accomplishments; many men not connected with the university were devotedly attached to him. His high reputation for eloquence and for general and professional knowledge attracted students to Padua from all parts of the civilized world; Padua in several of its faculties was at that time the most famous of universities.

Of comparative anatomy Fabricius was a most laborious student; from its standpoint he treated the eye, larynx, veins, ear, and intestinal canal, the development of the fetus, and many other subjects. The improvements which his knowledge of anatomy enabled him to introduce into the practice of surgery were many and important, and his *Opera Chirurgica* (1617), which embraced every complaint curable by manual operation, passed through seventeen editions. His long career as a professor, fifty-four years, was a rich asset to Padua and the world of science. Many brilliant men began as his pupils. Casserius was one; his *Tabulæ Anatomicæ* comprise Correggio-like copper plates in which scientific accuracy and artistic perfection are wonderfully united; Doctor Holmes called them "eviscerated beauties." Another pupil was Caspar Bauhin, who later went to Basel as Professor; his work in anatomy and botany are famous and his discoveries were many; he was a well-known gynecologist, and he gave the first correct description of the appendix vermiformis.

But most brilliant of all was a young Englishman named William Harvey, who at the age of twenty-two became at Padua a pupil of Fabricius and Casserius, studying there from 1599 to 1603. The same interest that Fallopius had taken in Fabricius the latter in turn displayed toward

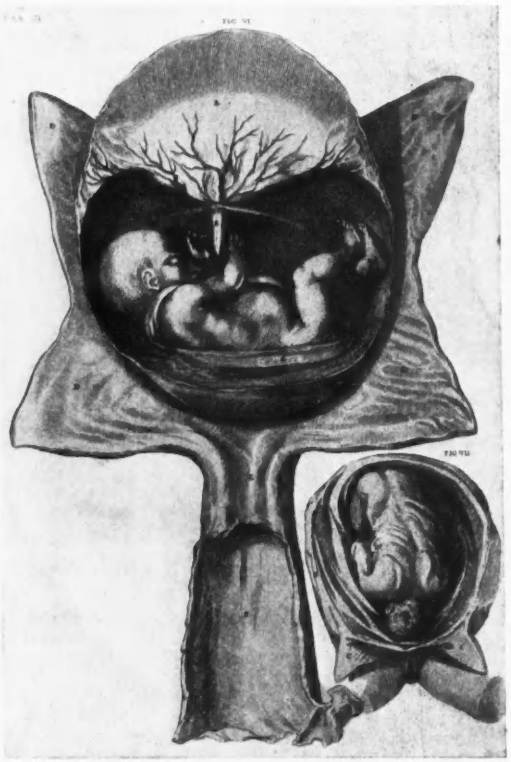


Fig. 4.—Figures vi and vii, Plate iii, of *De Formato Fœtu*. Figure vi shows the position of the fetus floating in the sudor, also the placenta with the chorion appended to it. A, the placenta with the chorion appended. B, the umbilical vessels. C, the sudor in which the fetus floats. D, D, D, D, the four parts of the uterus. E, the neck of the uterus. F, the open vagina. G, the more prominent branches of the vessels of the chorion. Figure vii shows the position of the fetus already trying to get out of the uterus. A, the head of the fetus. B, pudendum. C, the surface parts of the abdomen removed with a small knife.

Note: The explanations given above, and accompanying the illustrations following, are translations from the original Latin texts that face the pictures.

Harvey, who in later life referred affectionately to his teacher as "a most skillful anatomist and venerable old man." To what extent Harvey was inspired by his teacher is shown by D'Arcy Power in his charming biography in *Masters of Medicine:* "Indeed, when we look at Harvey's work, much of it appears to be a continuation and amplification of that done by Fabricius. Both were intensely interested in the phenomena of development; both wrote upon the structure and function of the skin; both studied the anatomy of the heart, lungs, and blood vessels; both wrote a treatise *De Motu Locali.*" The world has heard much of the status of Harvey's *De Motu Cordis,* but the training Harvey got in Padua may have determined his zest for demonstration. The importance of Harvey's work is not so much in the discovery of the circulation of the blood as in its quantitative or mathematical demonstration. With this start, physiology became a dynamic science, and it was at Padua that Harvey's attention was first directed to purely mechanical explanations of vital phenomena.

(To be continued)

CLINICAL NOTES AND CASE REPORTS

VARICOSE VEINS

INDUSTRIAL COMPENSATION RELATIONSHIP: ARE THE DEEP VEINS PATENT?

REPORT OF CASES

By NORMAN J. KILBOURNE, M. D.
Los Angeles

GANGRENE of the leg, requiring high amputation, following excision or obliteration of varicose veins, has been reported several times when adequate tests for patency of the deep veins had been neglected. Such accidents may be prevented by the bandage test,[1] which consists in bandaging the leg tightly with a linen mesh bandage so that the superficial veins are occluded. If the circulation in the deep veins has been previously obliterated by phlebitis and that in the superficial veins has been now obliterated by adequate bandaging, the patient will have severe pain if he tries to walk. This test requires no special knowledge, and is so simple that in large clinics it can be performed by the nurses before the doctor sees the patient.

However, patients occasionally present themselves in whom the bandage test alone is insufficient. It is perfectly true that if there is no pain on bandaging, the deep veins are patent. But it was not intended that every patient who has pain when the leg is bandaged should be rejected. Such patients need intensive study, with additional tests. A case in point is here reported.

REPORT OF CASE

A workman, age forty-five, seeking industrial compensation, was seen in consultation. He complained of pain at the site of varicose veins, along the medial aspect of the left leg just below the knee, which he declared came on following an accident which happened while at work four months before. He declared that the leg became bruised and swollen at this location and had since then given him so much pain that he was totally incapacitated. When asked whether the pain was worse if he walked or if he stood on his feet, whether it was relieved after he lay down, whether it was worse at night, and whether it was present when he awoke in the morning, he replied at once that he had the pain all the time. Physical examination revealed varicose veins of moderate size at the location mentioned. When the bandage test was made the patient said he could not have the bandage on it—that it caused him excruciating pain.

* * *

Two questions were raised: First, was his pain due to varicose veins? Second, did the pain on bandaging, so as to occlude the superficial veins, mean that the deep veins were occluded?

* * *

There was no history of locking of the knee and no tenderness over the internal semilunar cartilage. An x-ray had ruled out bone tumor and proliferative periostitis. An excellent pulsation in the artery tibialis posterior ruled out arteriosclerotic changes. The pain and tenderness were not up and down the leg along the distribution of any nerve. There was no discoloration of the toes and no pain in the feet; but to exclude more surely thrombo-angiitis obliterans, Samuel's test was made.

COMMENT

In Samuel's test the leg is elevated vertically while the patient is lying down. Then he is told to flex and extend his ankle alternately twenty times. If thrombo-angiitis obliterans is present, usually the sole of the foot turns pale and the patient has pain in the foot or cramps in the calf muscles.

When Samuel's test was made, the patient reported above complained of severe pain, not in the foot nor in the calf muscles, but superficially on the medial aspect of the leg just distal to the knee at the same old location as the varicose veins. There is no known organic disease that causes pain localized at such a point when Samuel's test is made. The patient's response to Samuel's test suggested malingering.

In answering the second question, as to whether the deep veins were patent, it was evident that reliance could not be placed upon the bandage test, for the patient was out after compensation and, therefore, complained of pain under any test. Objective tests not related to his accounts of his subjective feelings were necessary.

Perthe's test was made. In this test a tourniquet is applied above the level of the varicose veins, just tightly enough to obstruct the superficial venous circulation, with the patient standing. He then walks. If, after walking, the varicosities become much less prominent, it must be that the blood, although prevented by the tourniquet from flowing upward through the superficial veins, has been able to flow through communicating veins to the deep veins. Since these have drained the blood, they must be patent. The veins emptied quickly when he walked with the tourniquet on. This proved the deep veins patent.

A modified Trendelenburg test was also made. A tourniquet was applied around the thigh with the leg elevated. The leg was then lowered and the patient told to stand. The veins refilled at once, even before the tourniquet was released, showing that there was a reflex of blood through communicating veins from deep veins. This confirmed Perthe's test, demonstrating patency.

More serious is the problem when there is a frank history of deep phlebitis:

REPORT OF CASE

A housewife, aged thirty-four, complained of painful varicose veins for seventeen years which came on following an attack of phlebitis. There was much pain when the linen mesh bandage was applied. Was this because the phlebitis had obliterated her deep veins?

In this patient, when the Trendelenburg test was made repeatedly, with the tourniquet at successive levels on the leg, the varicose veins refilled immediately. This indicated that the blood came through communicating veins from patent deep veins. Injections were made. For several days

after each injection there was pain in the legs. However, this time the pain after injection was relieved, rather than made worse, by wearing a linen mesh bandage. Such relief is characteristic of injections following an old phlebitis.

Mechanical tests alone for the patency of the deep veins are insufficient when there is a past history of phlebitis. The tests may demonstrate the patency of the deep veins now, but injection may stir up the old phlebitis in deep veins and occlude them. Such patients should be treated rarely, if at all, by the occasional worker. A detailed discussion of factors involved in these cases, with special precautions needed, has been made by the author [2] and by Delater.[3]

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ASPERGILLUS DERMATOMYCOSIS*

REPORT OF CASE

By HOWARD A. BALL, M. D.
San Diego

ALTHOUGH skin infections with aspergilli are known to exist in tropical countries, surprisingly few cases have been described from the United States. This dearth of cases seems out of proportion to the frequency with which the infection is casually mentioned by dermatologists. Puestow [4] and Myers and Dunn [3] have each recorded a case, while Lynch [2] in a general way associates such an infection with Leptus bites. Aside from these articles very little of a specific nature is recorded. It is therefore deemed advisable to describe the following case.

REPORT OF CASE

H. C., a Mexican male laborer of thirty-five years, entered San Diego County General Hospital June 18, 1931, on the skin service of Dr. Philip K. Allen. Three weeks previously, he first noticed a reddened swelling on the dorsum of the left hand and wrist while working in a sewer ditch. This ulcerated very rapidly (twelve hours) and gradually increased in area. There were swollen glands in the axilla, but no fever or other systemic symptoms. General physical examination was negative. Several days after admission, a reddened area was noted near the left eye. Superficial x-radiation was administered to both lesions without improvement. Several cultures from the wrist lesion yielded staphylococci. Urinalysis and Wassermann were negative. Blood count showed a total of 11,800 whites per millimeter,[3] with 70 per cent neutrophils and 6 per cent eosinophils.

* From the department of pathology, College of Medical Evangelists, and the pathology laboratory of the San Diego County General Hospital.

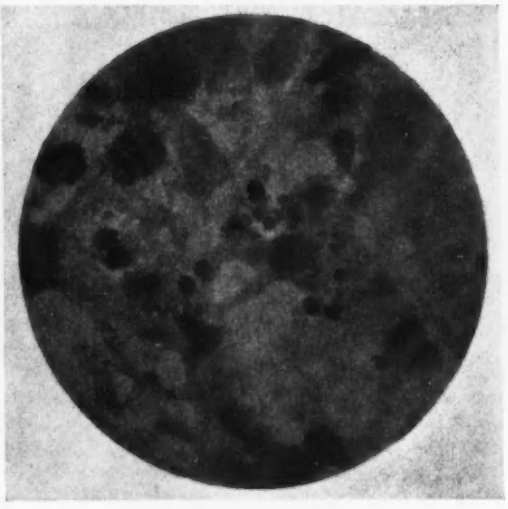

Fig. 1.—Small Gram-positive yeast-like bodies found in biopsy material with Gram-Weigert technique. 1250 X.

Two weeks after admission biopsy was resorted to in an attempt to clarify the diagnosis. This presented epithelioid hyperplasia and intra-epithelial abscesses quite similar to the picture seen in blastomycosis. Prolonged search did not reveal any such organisms. Gram-Weigert technique was employed in an attempt to demonstrate fungi of the "yeast type."

Deep in the cutis, and where the inflammatory exudate was thickest, small Gram-positive yeast-like organisms were found in groups, but could not be demonstrated to be budding (Fig. 1). These resembled very much organisms of the monilia group previously seen in tissues by the writer in a case reported as "torula." [1]

Meanwhile the lesions had considerably improved with copper sulphate wet dressings and internal sodium salicylate administration and the patient was discharged to the outpatient clinic with instructions to return in one week. He failed to return for several weeks. He again presented himself at the hospital nineteen days after discharge, in a much aggravated condition.

At this time the lesion on the hand had spread considerably. Lesions on the face were very pronounced and presented small pustules but no ulceration. There was marked swelling, involving the region of both eyes, which extended to the conjunctival margins. The appearance at this time is shown by the illustrations (Figs. 2 and 3).

Cultures on Sabouraud's medium and plain agar and Loeffler's blood serum made during the previous admission were negative except for Loeffler's, which after one week's time showed a growth in the thinnest portion of the slant that had become somewhat dry. This was later successfully transferred to Sabouraud's media made with either maltose or dextrose. The appearance of the growth varied considerably between these two sugars.

At the second admission, cultures were made from the small pustules on the face but no growth was obtained. Wet mounts, however, presented asci having thick side walls and thin ends, filled with endospores. They were elongated (about 15 microns) and presented rather square ends.

The patient again improved on copper and zinc sulphate wet packs externally and sodium iodid intravenously and potassium iodid by mouth. He was discharged to the outpatient clinic four weeks after the second admission, much improved. The lesions subsequently progressed to complete healing.

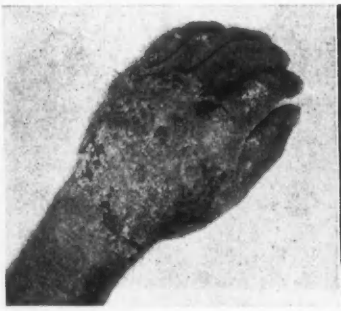

Fig. 2.—Appearance of skin lesions on hand.

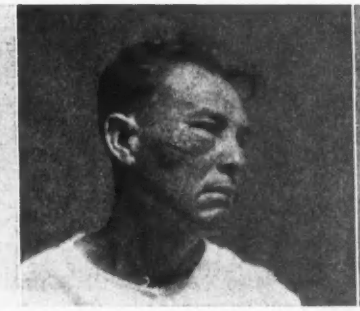

Fig. 3.—Appearance of skin lesions on face.

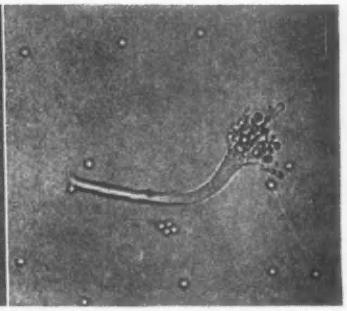

Fig. 4.—Wet mount of culture showing characteristic fructifying arrangement of an aspergillus. 500X.

COMMENT

The original culture was obtained on Loeffler's blood serum at the end of one week in the portion of the slant somewhat dried from incubation. The appearance was that of a fine white powder or frost. This was transferred to Loeffler's serum several times with a constant appearance except in one instance when, after two months, darker colonies similar to those characteristic for Sabouraud's appeared. On Sabouraud's dextrose agar, the colonies appeared in twenty-four hours. They were at first discrete whitish mound-shaped colonies which soon fused. At the end of three days they began to take on a greenish cast and gradually changed into a very dark brown. Through this brown growth, covered with dark hyphae, appeared at the end of ten days to two weeks a snow-white tuft or two of hyphae, which maintained their whiteness and gradually spread.

Quite different was the growth on Sabouraud's maltose. In this instance the growth spread over the surface of the medium, causing deep furrows and wrinkles. Aerial hyphae were scarcely discernible, except in the drier portion of the slant. The color changes occurred much more slowly and an orange transition phase was observed. This was then replaced by the greenish color.

In broth the colonies appeared as fluffy balls which grew to a diameter of about four millimeters. The colonies at the surface fused and spread over the surface of the medium. These colonies presented a dry growth with fine hyphae. Microscopically the organism is composed of numerous mycelial threads and small round organisms approximately one-half the size of red blood corpuscles. Occasionally a terminal branch is seen, bearing on its free end a mass of organisms arranged in such a manner as to identify the organism as an aspergillus (Fig. 4). The cultural characteristics have gradually changed during six months' cultivation.

The organism is distinctly an aspergillus, but is not further classified.

Two attempts to inoculate the abraded surface of the forearm of a volunteer human subject with this organism have failed. The conditions of the original infection cannot be said to have been duplicated, however, and the additional possibility exists that the vegetative stage on culture media differs in pathogenicity and from that found in the soil. Such is the case with certain other fungi. Whether or not bacterial infection must also be present is unknown.

San Diego County General Hospital.

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Calls Character More Important Than Grades.—Uncertain character and shocking manners are found in graduates of colleges and often of professional schools, said Nicholas Murray Butler, president of Columbia University, in his annual report made public in late December. Doctor Butler feels that the mere passing of examinations should not win the student advancement.

"The capacity to pass these intellectual tests should rank third in estimating the educational progress of a student," Doctor Butler declared. "Evidences of character-building should come first, and evidences of his good manners and respect and concern for others should come second; and, these lacking, no amount of intellectual performance of any kind should win him advancement or graduation. Such a one would not be educated at all; he would only have been instructed in some degree in the subject-matter of a given field of knowledge."—*A. N. A. Bulletin.*

Graduate Versus Undergraduate Nursing.—By abandoning its school of nursing and substituting a graduate staff, a sixty-bed Canadian hospital reduced its per capita cost 74 cents a day, according to an analysis of government figures. Grace M. Fairley, superintendent of the school for nurses, Vancouver General Hospital, discusses the change in nursing service in the *Canadian Nurse* for November.

Besides the financial saving, the superintendent of the hospital found five other advantages in a graduate staff: (1) there can be closer supervision of the smaller group of workers (that is, the graduate staff); (2) the greater sense of responsibility, especially of hospital property, results in more economical use of all supplies, particularly record forms, dressings and linen; (3) there is less illness among the graduate staff, with consequent reduction of relief staff and cost of care during illness; (4) a fluctuation of staff is possible with graduate personnel if or when there is a reduction of patients; and (5) the patients are getting better service.—*A. N. A. Bulletin.*

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

THE FLAT-FOOT

A. GOTTLIEB, M. D. (727 West Seventh Street, Los Angeles).—*Prognosis.* In this discussion of prognosis and treatment of flat-foot, "the static flat-foot" only is here considered.

Based upon the etiologic axiom that flat-feet result from a disproportion between the weight-bearing capacity of the feet and the load they are called upon to carry, the prognosis must be evaluated and the treatment executed.

From the viewpoint of prognosis it is not the shape of the feet on weight bearing which should be deliberated, but their function and the freedom from subjective symptoms.

The capacity of the feet to bear weight must be increased by attacking all those factors which have the tendency to lower this capacity. Remote foci of infection, chronic constitutional diseases, long recumbency, established faulty foot posture and, mainly, ill-fitting shoes, have the tendency to weaken the foot structures, principally the foot and leg musculature. The prognosis is in direct proportion to our ability to eradicate or ameliorate these etiologic factors. In many respects the outcome rests upon the patient's obedience to properly carry out the instructions given in the course of the treatment.

The load which the feet have to carry must be controlled by attention to matters such as body-weight reduction, changing the occupation which requires prolonged upright position, or carrying of heavy loads.

Upon the ability to augment the functional capacity of the feet and upon the lessening of the superimposed weight, the prognosis necessarily depends.

Treatment.—For the successful treatment, three things are requisite: (1) Properly fitting shoes with the required correction of the heel and, at times, sole. (2) Physical and mechanical treatment, including exercising and physiological walking. (3) Supports, whenever indicated, as a temporary measure. Let us consider these in more detail.

1. *Shoes.*—A laced shoe with a flexible or semi-flexible shank should be provided. It should fit snugly enough to make the foot follow its movements and should have a front sufficiently wide and long to permit the spreading of the toes and lengthening of the foot on weight bearing. The height of the heel must vary according to the ability of the patient to dorsiflex the foot. The high heel habit should be overcome only gradually; a sudden change to low heel will result in stretching pain in the calf and thigh. The inner side of the heel, in some cases also the sole, should be raised by inserting a wedge in order to tilt the foot and throw the body weight outward. The thickness of the wedge must be so adapted to the individual need that the corrected shoe, plus the support, will form a mechanical unit that allows the foot to rest on its normal points of stability (the outer border, the heel, and the heads of the metatarsal bones). Correct shoe fitting is of prime importance for any, even for the normal, foot.

2. *Physiotherapy.* — Physical and mechanical measures should be applied in order to restore foot elasticity, to reduce inflammation of joints and soft tissues, to regain muscle strength and to acquire the habit of correct foot posture.

The exercises of the simplest kind should be taught. In addition to the classical one, found in any textbook, two may be added. They are of the active-resistive type.

To strengthen the supinators, the tibialis muscles, the patient, seated, places the outer border of the lower third of the leg on the opposite knee. He actively supinates the foot and resists this motion with the palm of the hand against the first metatarsal area. During this act the foot is held at right angle and the toes are flexed.

To increase the power of the intrinsic foot muscles, the patient places the bared feet in a basin of hot water and grasps with the toes small pieces of rubber tubing which float on the surface of the water. This active-resistive toe-gripping is more effective than the customary picking up of marbles.

The formation of the habit of correct standing and walking is the most important element in the treatment. Standing and walking should be executed with the feet inverted or, at least, parallel, so that most of the weight is carried on the outer, namely, the stronger portion of the foot.

3. *Indications for Arch Supports.*—The contour of the foot is the least consideration, since we find low-arched feet with discomfort and high-arched ones with unbearable pain on weight bearing. Pain alone should serve as an indication for the need of a supporting device. The pain may be called "pain of insufficiency" and is produced by straining of the ligaments, fasciae, and joints. It should be strongly emphasized that the support is only a temporary measure, worn as long as pain lasts and discarded when the symptoms cease.

The support has a threefold object. (1) It relieves the tired and weakened leg and foot muscles from undue strain during the active part of the day. (2) It retains the arches in that position which the feet are able to assume by voluntary muscular effort or by passive restoration. (3) It takes the strain off the plantar fascia and the ligaments of the feet.

These objects the support shares with any brace. As such only should it be regarded. It should

not be expected of a support that it will restore or rebuild the foot arches. The only agent for this rebuilding process is the musculature. To the muscles all attention should be directed so that they may regain strength to better perform their task.

Whether metal supports, leather insoles with sponge, rubber or felt pads, whether hard leather, celluloid or any other material is used in the construction of the support makes no difference as long as they are made to conform to the corrected shape of the foot, hence "made to order" and not purchased over the counter. It must be admitted, however, that any rigid foot support is harmful because it converts the elastic foot into a rigid system, is liable to produce periostitis from pressure and prevent normal function of the planta muscles. A properly fitted and adequately constructed shoe may make the support needless.

At all times, patients must be impressed with the fact that the cure depends largely upon their willingness to coöperate in the treatment: to adhere to the selected and corrected shoes, to execute faithfully the prescribed exercises, and to adopt and maintain the habit of physiologic foot posture in standing and walking.

* * *

H. H. MARKEL, M. D. (384 Post Street, San Francisco).—The diagnosis of flat-foot conditions is sometimes very obvious, but many times flat-feet give no symptoms whatever. A correct diagnosis must be arrived at by the same route as in any other line of medicine, from history taking, symptoms and signs.

Regarding Diagnosis.—The diagnostic symptoms are fatigue and pain, and the diagnostic sign is tenderness.

The following is the order of examination which will lead to the correct diagnosis:

History taking: Onset, previous attacks, character and location of pain and time of occurrence.

Examination: Shoes and stockings off. Examination of the soles and heels of the shoes frequently gives clues. Note posture of body and position of feet. Patient to supinate feet, turning over on the outer sides of feet.

Palpation and manipulation: Find tender areas and determine condition of flaccidity or rigidity to determine ligamentous relaxation or muscle spasm. Determine if there is a shortness of the heel cord. (Normally the foot should dorsiflex fifteen degrees above a right angle, with the knee straight.)

Final diagnosis is arrived at by eliminating the conditions which give similar signs and symptoms.

A therapeutic test is very often of value, consisting of a pad and strapping with adhesive.

Types of Flat-Foot.—The following are the usual types of flat-foot with their signs, symptoms, and differential diagnoses.

I. *Acute Foot Strain.*—(*a*) History of pain in feet and up the legs, even as far as the knees, usually bilateral, occurring after weight bearing, especially standing. Relieved by rest and aggravated by use.

(*b*) Inspection shows flattened longitudinal arch with the feet more or less everted and pronated.

(*c*) Palpation and manipulation shows the feet to be flexible and tender upon pressure over the astragaloscaphoid ligament.

(*d*) Therapeutic test by felt pad and adhesive plaster strapping the foot in supination usually gives relief of pain.

Acute foot strain must be differentiated from:

1. Arthritis of the tarsus by the fact that in arthritis the foot is more or less rigid and manipulation is painful.

2. From sciatic pain caused by low-back strain and sacro-iliac arthritis, by the positive Kernig test and the therapeutic test of strapping the feet.

3. Intermittent claudication, by the peculiar history of cramp-like pain coming in the calves after walking a few blocks, and complete relief by a few minutes' standing; also by the absence of the pulse in the dorsalis pedis and posterior tibial arteries.

II. *Rigid Flat-Foot with Peroneal Spasm.*—(*a*) History of intermittent pain and limping and tiring; usually in one foot, and frequently happening with children.

(*b*) Inspection reveals the fact that one or both feet are markedly everted and that the patient cannot supinate the foot by turning the ankle out and the foot inward.

(*c*) By manipulation the tarsus is rigid and attempts to supinate the foot, causing extreme pain through the tarsus and along the peroneal muscles.

Differential Diagnosis:

Rigid flat-foot with peroneal spasm must be differentiated from:

Arthritis of the Tarsus.—(*a*) Occurs in older people usually.

(*b*) Chronic course and not intermittent.

(*c*) Pain is worst in the morning when weight bearing is first assumed but relieved after a while by use, and again aggravated at once by use after resting.

Tuberculosis of the Ankle.—(*a*) By marked limp with long chronic course, occurring in children.

(*b*) X-ray showing destruction of bone in astragalus usually.

(*c*) Positive skin test for tuberculosis.

Anterior Metatarsalgia.—1. History of intermittent pain in the ball of the foot, usually one foot. The pain is like a cramp or a hot needle and is felt most frequently between the heads of the fourth and fifth or third and fourth metatarsals. Pain always comes on while patient is wearing shoes and is relieved by removing shoes and rubbing and manipulating fore part of the foot.

2. Upon inspection the longitudinal arches may be normal but the fore part of the foot is broad and flat with a depression on the dorsum in the region of the painful area. Hard calluses are frequently found on the sole of the foot beneath one or several metatarsal heads.

3. If lateral pressure is made by the hand grasping the ball of the foot while the affected metatarsal head is depressed between its neighboring heads, a severe pain is produced. A short heel cord is found very frequently to complicate and aggravate this condition by depressing the anterior arch.

4. The therapeutic test is usually successful here also by using a felt pad and adhesive plaster, binding the fore foot circularly with adhesive and a felt pad just back of the metatarsal heads, but not neglecting to support the longitudinal arch as well by pad and strapping.

Anterior metatarsalgia must be differentiated from:

1. Fracture of the metatarsal bones and phalanges by careful history and x-ray examination.

2. From plantar warts by paring the suspected area with a razor blade or scalpel when the peculiar stippling will be found in a small rounded area which points deep down through the skin.

3. Also fractures of the sesamoids beneath the big toe joint must be excluded and differentiated from a double sesamoid. The former shows an irregular line between the fragments which may or may not be equal in size, while double sesamoids look like two coffee beans with a smooth straight line between them.

* * *

HAROLD E. CROWE, M. D. (Orthopaedic Hospital, Los Angeles).—In all branches of surgery, but possibly more so in orthopedics, differences in technique and methods of treatment are an interesting and endless source of discussion.

In our treatment of relaxed and painful feet the shoe is looked upon as a mechanical means of maintaining a weakened architectural structure, and must always be stiff-shanked, having a steel arch built in from heel to sole. This is based on the obvious argument that if a shoe is to support weight its material must be strong enough to bear that weight without giving under the load. The group of orthopedists who use flexible shanked shoes present the equally fair argument that a splinted extremity will not develop its intrinsic musculature and will become stiff from disuse if its natural powers of motion are not encouraged.

Similar variance is noted in placing an inside tilt in the sole of the shoe. Since the pronation of the foot behind the midtarsal joints is necessarily combined with the opposite rotary motion or supination of the fore foot, an inside sole tilt only serves to maintain or increase the existing deformity. The sole tilt, therefore, if used at all is much better placed under the outside of the sole as it then helps to correct the abduction and supination which is always present beyond the midtarsus in relaxed feet. This last point, which is contrary to current teaching, is evident if one stops to consider the fact that as the arch sags down to the inside in its posterior pillar, the first metatarsal head is raised in relation to the foot as a whole; or in other words, the process of arch relaxation is a progressively increasing pronation of the ankle combined with progressive supination of the foot distal to the astragaloscaphoid joint.

These ideas are used in the treatment of feet in childhood just as in adult life. The pronated flat-feet and knock-knees of children under six years are so common that some doctors are inclined to consider this condition normal and advise parents not to worry: "The child will outgrow it." This statement is absolutely right if corrected to read: "The child will partially outgrow it." While they were unaware of any deformity a review of several hundred young adults has shown mild knock-knee with a toe-out gait, indicative of slight foot relaxation in the same proportion found among babies. These persons are free from symptoms, but as a rule are not athletes; and the slight residual deformity is a liability in that future time when sedentary occupation is combined with spasmodic strenuous exercise or in women when the menopause brings a rapid increase in weight and consequent strain to otherwise symptomless feet.

The normal baby should begin to lift the long arch from the ground between twenty-four and thirty months of age, but, in city-bred infants, deprived of the sun-baked naked life of uncivilized peoples, there is enough retardation in bone development to prolong the flat-foot with consequent knock-knee to five or six years or even longer. This is true in children who have never shown any definite rachitic lesions. In such children it is possible, by using inside heel tilts on stiff-shanked high shoes supplied with soft arch pads, to promise rapid correction of the leg alignment with growth. This much can be promised and, with the exception of about five in a hundred cases, the formation of the foot will also progress normally, permitting the discontinuance of all mechanical support at about fourteen years. In the five exceptions, cases of congenital flat-foot, the support may be removed after years of careful guidance; and while x-ray pictures of the foot at rest will show a normal foot, x-ray or clinical examination of the foot bearing weight will show a flat-foot. These cases are surgical problems.

Flat-foot operations have been devised by numerous orthopedic surgeons. We use that operation published by Lowman in 1923, which is based on the little recognized but obvious fact that the anterior tibial tendon pulling directly upward under the transverse ankle ligament and directly backward from its insertion on the inside of the base of the first metatarsal, is a deforming factor in flat-foot after that lesion has passed a certain degree, so that development of this muscle actually tends to deform rather than correct the foot, as is commonly taught. The operation consists simply in redirecting this tendon through the astragaloscaphoid joint from below up without cutting it free from its normal insertion, and in lengthening the short heel cord which is usually found in these cases. In making a bed for redirecting the tendon it is possible to correct the bone deformity. This simple operation gives a foot which maintains its position without mechanical support and which retains the mobility of a normal foot.

Operative treatment is reserved for those rare cases in which structural variations are complicated by symptoms justifying such intervention. The great majority of foot faults and the associated faults of leg alignment in children are amenable to correction through the simple and comparatively inexpensive process which may be called "guided growth."

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Leaflet Regarding Rules of Publication. — California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

PROPOSED PUBLIC HEALTH LAWS BEFORE THE CALIFORNIA LEGISLATURE

The 1933 California Legislature.—On January 2, 1933, the California Legislature began its fiftieth session, meeting for twenty-one legislative days through January 28, on which day it began its constitutional recess; to reconvene on February 28, then to continue until adjournment, which will probably be some time in April.

* * *

The Legislative Record to Date.—We have before us the volume known as the "Senate and Assembly Semi-Final History." It is a book with 310 pages devoted to the Senate and 541 additional pages devoted to the Assembly; or 851 pages on which are printed in fairly small type the titles of proposed laws and their present status in senate or assembly committees.

The State Senate history gives a list of 1164 new laws proposed by State Senators, plus forty proposed constitutional amendments, seventeen senate concurrent resolutions and fifteen joint senate resolutions. The State Assembly history, on the other hand, lists 2313 new laws proposed by state assemblymen, plus ninety-two assembly constitutional amendments, thirty-four assembly concurrent resolutions, and twenty assembly joint resolutions. These facts are here enumerated to indicate to members of the California Medical Association the mass of proposed legislation which our state law makers consider and favorably or unfavorably act upon, in their brief three or four months' session.

* * *

Why Is a Legislative Session of Importance to the Medical Profession?—There may be some who may be tempted to say, "But what has the organized medical profession to do with all this, and why should physicians be concerned about these many proposed laws?" The answer is that the title of every one of these laws must be carefully scanned; and every proposed measure which has a title that seems to have even a remote relationship to public health activities must then be inspected and carefully read, to determine whether anything in the text would make for desirable or undesirable public health legislation. The burden of doing this important and laborious service for the profession falls on the shoulders of a few officers and committeemen of the California Medical Association. From the standpoint of time and energy required, and of responsibility borne or additional work to be done, theirs is not an easy or an enviable task. For, through past experience, these officers and committeemen know that no matter how wholeheartedly and wisely they give of themselves, that more or less legislation undesirable from the best public health and medical standards will be enacted. How much of such undesirable legislation is enacted at any particular legislative session, depends not only upon the alertness and astuteness of the officers who are on guard in these matters, but also in good part upon the interest which the members of the California Medical Association, as individuals and through their county societies, display in coöperating with the State Association representatives.

The California Medical Association county societies can render important aid through their local state senators and assemblymen. The December CALIFORNIA AND WESTERN MEDICINE, on page 426, printed the roster of the present legislature, giving names, home addresses and other information concerning state senators and assemblymen. The February CALIFORNIA AND WESTERN MEDICINE, page 136, printed maps showing the various senatorial and assembly districts. An inspection of those presentations should indicate the further complexities of a legislative session.

* * *

List of Public Health Bills Printed in This Issue.—Readers who wish to orientate themselves further concerning proposed legislation having a

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

relationship to public health and medical matters, are referred to the miscellany department of this issue of CALIFORNIA AND WESTERN MEDICINE. There will be found a list, sent us through the courtesy of Dr. C. B. Pinkham, secretary of the California Board of Medical Examiners, in which most of the proposed laws having to do with the public health or healing art practice are grouped under various subheads. It is printed not only for its special reference value, but also to permit California Medical Association members to visualize better the tremendous task confronting those officers and committees who are called upon to follow these various measures in their legislative course and to take action thereon and intervene, should that be necessary. (For list, see page 221.)

* * *

Comments on Some of the Proposed Laws.— To discuss even the more important of the proposed laws enumerated in the list printed elsewhere and above referred to would require practically an entire issue of CALIFORNIA AND WESTERN MEDICINE, and that is out of the question. However, before leaving this phase of the subject, it may not be amiss to give some excerpts and brief comments on certain of the proposed laws. In due time the California Medical Association Committee on Public Policy and Legislation, of which Dr. Junius B. Harris of Sacramento is chairman (see advertising, page 2 for committee), will inform the officers of county societies when aid is needed. Your part as a member, if you are interested, is to inform your county society officers by letter or telephone if you think you can be of special service, so that your services may be utilized should your aid be needed later on. For such coöperation your county and state officers will be appreciative.

* * *

A County Hospital Bill (A. B. 2190; S. B. 782). Let us here first take up Assembly Bill 2190, introduced by Assemblyman Bliss of Carpenteria, Santa Barbara County. Its companion measure of same purpose and text was introduced as Senate Bill 782 by Senator Mixter of Tulare County. If either of these bills becomes a law, the county hospitals of California will be opened to the admission of non-indigent citizens; the counties to collect moneys for such hospitalization from such citizens. The effect of such a state hospitalization activity upon the private and semi-private hospitals which have been rendering service to our communities through all the years up to now, may easily be imagined. The charitable and non-profit work of such private and semi-private hospitals has kept practically all of them more or less impoverished. The enactment of either of the above bills would complete the picture of demoralization. After that, however, would come the demoralization of the taxpayers of the counties when they would be called upon to foot the increased county hospital bills for the care of these non-indigent citizens. In a county such as Los Angeles, for instance, it would be easy to add an annual $1,000,000 extra cost burden to that county, through the institution of such a system. That is a sum which in days such as the present should make even so rich a county as Los Angeles to stop, look and listen.

The provision that non-indigents should pay the counties does not always work out well in practice, as witness, San Luis Obispo County, where recently, we are told, the Supervisors felt obliged to cross off a large sum due that county from non-indigents and are now facing legal difficulties as a result of their action. If such a system of payments to counties were adopted, it is pertinent to ask whether such non-indigents could expect professional services from attending staff members who are giving free service to indigent patients. It is our viewpoint that attending staff members could and probably would refuse to render free professional services to such non-indigents. Is there any rule of medical, business, or social ethics which demands that physicians shall not be paid for their services to non-indigents? As a matter of fact, we are coming to a time when members of the profession who are on attending staffs of public hospitals should and probably will demand compensation for services rendered even to indigents. Do citizens in business consistently give without cost, goods to all applying indigents, and do members of other professions render such massive gratuitous aid as physicians have been in the habit of generously giving to the poor of the community? Is it not time to take stock and to devise ways and means to call a halt on some of this professional work, so often unappreciated not only by the indigent recipients, but also, what is far worse, by the taxpaying citizens who are thus relieved of this portion of the costs of a humanitarian burden?

Assembly Bill 2190 is not long, and we here reprint its somewhat similar Senate companion measure exactly as sent out by the State Printer. It reads thus:

SENATE BILL No. 782

INTRODUCED BY SENATOR MIXTER
January 28, 1933
Referred to Committee on County Government

An Act to amend section 4223 of the Political Code, relating to the duties of boards of supervisors

The people of the State of California do enact as follows:

SECTION 1. Section 4223 of the Political Code is hereby amended to read as follows:

4223. The board of supervisors in each county may establish and maintain a county hospital *or branches thereof,* prescribe the rules for the government and management thereof and appoint a county physician and the necessary officers and employees thereof who shall hold office during the pleasure of the board; *and said board shall also have power to admit residents of the county to said hospital or its branches who are not completely destitute but who are able to pay a reasonable charge for the services rendered; said board shall have power to establish reasonable charges not to exceed the actual cost to the county for the services rendered by said hospital or its branches.*

Bills for a Board of Naturopathic Examiners.—Assemblyman Gilmore of San Francisco, has introduced A. B. No. 1159, the title of which reads:

"An Act to create a public corporation to be known as the 'Naturopathic Association of California,' to provide for its organization, government, membership and powers, to regulate the practice and licensing of Naturopathic Physicians, to create a board of governors and to provide for the appointment of a State Board of Naturopathic Examiners, and to provide penalties for violations hereof."

There is another bill (A. B. 1306) introduced by Assemblyman Dempster of Los Angeles, in which it is stated that it has been introduced "By Request." The title of the Dempster bill is as follows:

"An Act to regulate the practice of naturopathy, to establish a State Board of Naturopathic Examiners, to provide for their appointment and prescribe their powers and duties, defining the practice of naturopathy and prescribing the terms upon which licenses may be issued for such practice, prescribing penalties for violation hereof, and repealing all Acts and parts of Acts inconsistent herewith."

Just what is the purpose of these dual measures, with their rather diverse set-ups, we do not know. If space permitted, either of these proposed measures could be made the basis of interesting comment. Each is a typical expression of cultist medicine standards: preliminary education of high school standard or its equivalent (the "equivalent" one of those elastic standards determined by the board itself instead of by an impartial, high standard basic science board); and professional training, far, far below the standards existing for years past in non-sectarian medical schools. Why a great commonwealth such as California should insist on high standards of preliminary college education and at least four years of strenuous professional training for non-sectarian physicians, and then turn around and legalize groups of cultist or sectarian healing art practitioners on much lower standards of preliminary and other training, seems incomprehensible. Yet such is the case. It is one of the interesting sidelights on modern day inconsistency.

Space does not permit going into a further discussion of these two measures, but the last paragraph of Section 17 of A. B. 1159, which should be of interest to the medical schools of California, may be here reprinted:

"Approved naturopathic colleges shall have the right to receive bodies of the unclaimed dead for the purpose of instruction and study and to obtain at the time of necropsy or inquest such material in the recent state as may be needed for scientific purposes in like manner and under the same provisions of law as such dead bodies and materials are received, secured and obtained by other institutions and persons for such purposes; and the State Board of Health shall assign and allot the same to naturopathic colleges, lawfully entitled thereto in the order of requests therefor received by it; and no school lawfully entitled to receive the same shall receive more than one such body until other such schools which have so requested the same have likewise received one such body."

* * *

An Act Defining Clinics.—Assemblyman Nielsen of Sacramento has introduced A. B. No. 1277, the title of which reads:

"An Act defining clinics and dispensaries and providing for the operation, conduct, maintenance, and the examination and regulation thereof, and the issuance of permits therefor by the State Board of Public Health and the Director of Public Health."

Supervision of clinics and dispensaries has long been much needed. That, no one can deny. This bill will no doubt receive careful consideration.

Comment on A. B. 795, which would license roentgen-ray technicians, will be found in a letter printed in the Correspondence column. (See page 225.)

* * *

Proposal to Abolish the State Medical Board.—Assemblyman O'Connor of North Hollywood, Los Angeles, through his A. B. No. 1813, naïvely proposes in a brief and rather incomplete measure to do a wholesale abolishing job, as witness Section 2 of his proposed statute. His bill will no doubt be properly taken care of. Section 2 follows:

"Sec. 2. The Department of Professional and Vocational Standards and all boards and officers under the jurisdiction of said department are hereby abolished and all the powers and duties of said board and officers in said department at the time this Act takes effect are hereby transferred to, placed in and under the jurisdiction of the following departments:

(a) To the Department of Health:
1. Board of Barber Examiners;
2. Board of Cosmetology;
3. Board of Dental Examiners;
4. Board of Embalmers;
5. Board of Medical Examiners;
6. Board of Optometry;
7. Board of Pharmacy; and
8. Board of Veterinary Medical Examiners.

(b) To the Department of Finance:
Board of Accountancy.

(c) To the Department of Public Works:
1. Board of Architecture, northern and southern districts;
2. Board of Registration for Civil Engineers; and
3. Registrar of Contractors."

* * *

Proposal to Transfer a Licensing Board's Funds to the State's General Fund.—The purpose which Assemblyman Cobb of Los Angeles hopes to accomplish through A. B. No. 2250, Sections 1 to 3 of which are printed below, we do not know. If, however, it means a transfer into the general fund of the state (which is used for miscellaneous purposes such as roads, prisons and what-not) of moneys collected through license fees of pharmacists and so on, and which moneys so collected should be allocated to the development of the standards of the pharmaceutical profession and the protection of the public from incompetent pharmacists, then the matter does become of interest to all professions. For once such a precedent is established, attempts in other directions would be made. Members of the learned professions submit to licensure fees as special taxes only when such special taxes are used for the protection of the people through the maintenance of the standards of their respective professions. It would be a gross injustice through special or class legislation to make professional men who pay real and personal taxes, also pay special licensure taxes into the state's

general fund, when no such special taxes are levied on citizens in various lines of business. A. B. 2250 reads thus:

"An Act to repeal an Act entitled 'An Act making an appropriation from the contingent fund of the State Board of Pharmacy to be used by the Regents of the University of California for the use and benefit of the College of Pharmacy of the University of California,' approved May 28, 1931, declaring the urgency thereof, and providing that this Act shall take effect immediately."

"Section 1. The Act cited in the title hereof is hereby repealed.

"Sec. 2. Upon the effective date of this Act, the State Treasurer shall transfer to the credit of the general fund any unexpended balance remaining out of the appropriation made by the Act hereby repealed.

"Sec. 3. This Act is hereby declared to be an urgency measure necessary for the immediate preservation of the public peace, health, and safety, within the meaning of Section 1 of Article IV of the Constition, and shall therefore go into immediate effect. The facts constituting the necessity are as follows: The general fund is depleted and it is necessary to augment this fund in order to meet the state's obligations for the present fiscal year."

* * *

In Conclusion.—It is not possible for the editor to discuss many of the bills on his desk and which are listed elsewhere in this issue, because he does not know what decisions thereon will be reached by the California Medical Association Council and the Committee on Public Policy and Legislation. What has been here presented may be taken as an indication of the task before the profession. Our comments have been made in the hope of securing the attention and active interest of California Medical Association members in this important prospective legislation, so much of which could greatly affect professional and economic interests.

In conclusion, let it again be remembered that the medical profession's viewpoints must be given to Senate and Assembly Committees through its official spokesmen. Our official spokesman at Sacramento is the Committee on Public Policy and Legislation, acting under instructions of the California Medical Association Council, which in turn, through its contacts with the county societies, aims to base its decisions on the best general and local policies and needs. If you who read this wish to help in the work, send in your suggestions to your county society officers; and they in turn will consider the same and then forward them to the California Medical Association officers.

COMMENT ON THIS AND THAT

California Medical Association Roster in This Issue.—In order to eliminate an expense of several thousand dollars which the printing of an elaborate California Medical Association directory such as that of 1930 would entail, the Council has ordered a roster prepared which could be printed in the official journal. It will be found in this issue on page 204.

This roster or directory has been arranged so that the residence city or town of each member is indicated and, through a key number, his county society. Additional information concerning school and year of graduation is easily obtained by reference to the "Directory of the California State Board of Medical Examiners," a copy of which is mailed each year to every physician licensed in California. The back edge of the cover of this issue of CALIFORNIA AND WESTERN MEDICINE contains the words "Roster Number" in order that it may be more easily found in your JOURNAL files. If you do not keep your JOURNALS, it may be well to place this March number aside for future use.

* * *

Del Monte Annual Session.—The sixty-second annual session of the California Medical Association will convene at the Hotel Del Monte, Del Monte, on Monday, April 24. All indications point to a successful meeting. This issue of CALIFORNIA AND WESTERN MEDICINE, page 195, prints the hotel rates. If you contemplate being in attendance, it would be wise to make a reservation for hotel accommodations. Otherwise, in case of a large attendance, if you wait until the last minute, it might be necessary to secure accommodations in Monterey, which, charming place though it is, is nevertheless not quite so convenient as the Hotel Del Monte itself. A list of Monterey hotels will be printed in the April CALIFORNIA AND WESTERN MEDICINE.

All members who can arrange to attend are urged to make an effort to do so. In addition to the inspiration that will come from the excellent scientific papers, and the good fellowship always incident to meeting one's fellows from other portions of California, there is this year a special reason for attendance, namely, the need of interchange of opinion on many of the economic problems now before the medical profession for solution. Some of these are peculiar to California and can be worked out only by members of the California medical profession. Try to arrange, therefore, so you may be among those present. The session begins on Monday, April 24, and closes on Thursday, April 27. The program of the Del Monte Annual Session and the "Pre-Convention Bulletin" will be printed in the April CALIFORNIA AND WESTERN MEDICINE.

* * *

Some California Maps.—The February issue of CALIFORNIA AND WESTERN MEDICINE, page 137, printed two maps that are worthy of study. Those maps are referred to at this time because the California Legislature is in session. Elsewhere in this issue appear comments on the large amount of prospective legislation before our law makers at Sacramento. A reference to the county population table on page 136 of the February CALIFORNIA AND WESTERN MEDICINE (and on page 202 of this issue) suggests some interesting thoughts. Note for instance that Senatorial District No. 1 consists of Modoc County (population 8038), Lassen County (population 12,589) and Plumas County (population 7913). These three counties, with a total population of 28,540, have one of the forty state senators. Los Angeles County, with a population of 2,208,492, also has one lone state senator. (In the last California reapportionment the senatorial districts were

mapped out along geographical lines, whereas the assembly districts are based on population.) Take now Assembly District No. 2, which, in order to secure one assemblyman, needs not only the counties of Modoc, Lassen and Plumas above referred to, but the additional counties of Siskiyou, Shasta, Trinity and Sierra to secure a population sufficient to be represented by one assemblyman. Los Angeles County, by contrast, has a total of thirty assemblymen to represent its greater population.

The significance of these facts, when considered from the standpoint of public health legislation, are these: that if active county medical societies everywhere are in operation throughout California, it is possible for the county societies located in counties with lesser population to be at times quite as powerful in support of public health measures as counties with large metropolitan centers. If the big city counties have a large number of assemblymen, the smaller agricultural and mining counties have perhaps a slightly greater influence in the state senate. And every law must first be sanctioned by both senate and assembly. It is to be remembered, also, that in a small county or group of small counties, as represented by one state senator, that the physicians of such counties as a rule have far greater influence with their state senator than do the physicians in counties with large cities.

Which prompts us to call the attention of our readers to the fact that this March number of CALIFORNIA AND WESTERN MEDICINE reprints the map of the state senatorial districts, and also a companion map showing the location of the county societies which make up the California Medical Association. We have used as our designation numbers in the county areas the key numbers used in the roster set-up of this issue. The editor has also indicated the counties in which the California Medical Association has no county societies (either individual or group). Such a map should be of service in the determination of future membership policies and organization efforts. In any event, it permits an easier visualization of the present county organization status of the California Medical Association. For map and table, see pages 203, 204.

* * *

Alpine County a Small County.—In the foregoing, reference was made to the list of California counties on page 136 of the February CALIFORNIA AND WESTERN MEDICINE. In that list the fifty-eighth or smallest county is that of Alpine. In preparing the table printed in the February issue of CALIFORNIA AND WESTERN MEDICINE, the editor found he did not have the information he desired regarding Alpine County. He accordingly wrote to the secretary of the California Board of Medical Examiners for information. Dr. Pinkham's interesting reply follows:

"Our records do not show that there are any doctors located in Alpine County, which is one of the smallest counties in the state in area and in population.

"The 'Survey Index of the State of California,' published by the Heald-Menerey Company, Inc., states that Alpine 'has one of the smallest populations of any county in the United States.' The 1920 census showed it had a population of 117 native whites and twenty-four foreign born, the latter being mostly from Germany and France. It is entirely without railroad or boat transportation, and the only industry is farming."

* * *

California Medical Association Prize Essays.—In every issue of CALIFORNIA AND WESTERN MEDICINE, on advertising page 2, is printed the announcement of the two prizes of $150 each which are annually awarded by the California Medical Association for the two best clinical and research papers. Any paper presented at an annual session may be entered for these prizes. On request, complete information will be given by the association secretary. It is hoped that the large number of papers presented at last year's annual session will be more than equaled by this year's entries. If you are at all interested in entering your paper, write at once to the association secretary. All correspondence is held as confidential and only the names of the successful essayists are ever given publicity.

Roentgen Irradiation and Suggestion in Treatment of Warts.—According to Lenk, roentgen irradiation is now one of the most widely employed procedures in the treatment of warts, particularly when they are disseminated and operative removal is difficult. The verrucae planae juveniles have been found to respond somewhat more readily than the verrucae vulgares. The author also points out that the favorable results of roentgen irradiation have almost been equaled by the results of suggestion therapy. For this reason he decided to investigate whether the results of roentgen treatment may not be largely due to suggestion. In summing up his observations he states that in evaluating the efficacy of roentgen rays or of suggestion, respectively, it is necessary to differentiate between verrucae vulgares and verrucae planae juveniles because, whereas simulated irradiation was never effective in the first type of warts, it did produce a considerable percentage of cures in the second type. The author emphasizes the fact that the simulated irradiations were given without any verbal suggestion whatever. Most cases of verrucae vulgares could be counteracted with real roentgen treatments and, although a considerable percentage of verrucae planae juveniles yielded to simulated irradiation, that is, to suggestion, the majority nevertheless responded better to real roentgen irradiation.—*Wiener Klin. Wochenschrift.*

Operations on Ocular Muscles.—The need of utilizing all the means which ophthalmology puts at one's disposal for the correction of muscular anomalies is summarized by Jameson in the following phases of the subject: 1. Recognition of the causes of squint and diligent efforts to obtain an intimate understanding of them. 2. Careful computation and gradation based not on deviation alone, but on all the underlying factors. 3. The consideration of reduction in muscular strength by true relaxation and also by the induction of hypertension, and the utilization of these factors to the best advantage. 4. The selection of the operative procedure best adapted to the existing conditions, with careful weighing and evaluation of effects. 5. The giving of the same requisites of scleral fixation and gradation to tenotomy as to advancement. 6. The appropriate use of the principles of ligated sutures, careful unmutilated dissection of muscles and supplementary capsular adjustment for both advancement and recession. 7. The postoperative care that combats inflammatory reaction. He believes that the practice of these principles will add much to security and stabilization in operations on the ocular muscles.—*Archives of Ophthalmology.*

EDITORIAL COMMENT

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Effect of Altitude on Drug Action. — For some time empirical observation has suggested differences in drug effects due to altitude. Recently Dr. A. J. Lehman and Dr. P. J. Hanzlik of the Pharmacological Laboratory of Stanford University Medical School have furnished definite experimental evidence of a significant effect of altitude on the action of digitalis.[1] Their study has been so carefully made that there is no doubt at all regarding the validity of their conclusions: "The emetic and fatal doses of digitalis in significant numbers of pigeons were found to be 40 and 22 per cent less, respectively, at an altitude of 10,000 feet than at sea-level. A similar tendency was shown by the extremes in fatal doses for cats, but the results were inconclusive, due probably to greater variations in cats and smaller numbers used. The higher potency of digitalis at high altitudes reflects changes in state of the emetic and circulatory functions at high levels and indicates the desirability of reducing the dosage of the drug at high levels so as to avoid undesirable and toxic reactions."

Whether or not these findings, with regard to digitalis, apply to other drugs is not known with certainty, but it is very likely that any drug, if action is mediated in part by circulation or respiration, will be found to be similarly affected by altitude. These observations would seem to be of considerable significance in California, where great variations in altitude may be found in a relatively restricted area.

Clinical studies on this problem are desirable, and it remains to be determined whether or not acclimatization may alter the tendency indicated by the work of the Stanford investigators.

Department of Pharmacology,
University of California.

C. D. LEAKE,
San Francisco.

II*

The Growing Complexities of Allergic Theory.—Conventional allergic diagnosis and antiallergic "desensitization" are based on the implied theory that each and every natural alien biological product is an antigenic unit and that it produces qualitatively identical allergic reactions in all organs and tissues of the same hypersensitive individual. As a corollary to this implied theory, the intracutaneous injection of a pollen extract, for example, is a logical diagnostic method to determine the specific pollen causing the internal allergic symptoms, and subcutaneous injections of this extract is the logical counterimmunizing technique. This conventional logic is today challenged by laboratory research.

Biochemical fractionation has demonstrated that all natural plant, animal and microbic products thus far studied are polyvalent allergic excitants, complex mixtures of type-specific, species-specific, genus-specific, and relatively nonspecific, lipoids, carbohydrates and biological colloids. These presumably monovalent fractions are often of widely different taxonomic distribution in nature.

Of equal clinical significance is the recent demonstration that the different organs and tissues of the same individual are not of the same biological specificity. Organ-specific proteins in the eye, in the thyroid gland and the kidney, for example, have been alleged and confirmed by numerous investigators, as well as organ-specific lipoids in the brain, kidney, and liver. There is the suggested possibility of organ-specific carbohydrates. Although such data are as yet too few for a detailed clinical theory, no clinical allergist dare longer assume that the basic specificity of the skin is necessarily identical with that of the bronchial musculature, nor that this musculature, in turn, is immunochemically identical with other internal tissues.

These presumptive organ-specific differences throw doubt on the conventional theory that allergic reactivity is qualitatively the same in all tissues of the same individual. Local reactivity is conceivably against the "specificity differential" between the extraneous agent and the local cells. The "allergic skin differential" of a given pollen may well be qualitatively different from its dominant reacting fraction or differential in the lungs. If so, skin reactivity and bronchial reactivity are no longer necessarily qualitatively parallel.

A lack of invariably reliable diagnostic parallelism between the skin test and internal symptomatology has long been recognized by professional allergists.[1] Recent tissue analyses merely suggest a plausible explanation for this seeming physiological paradox.

Recognition of the multivalent nature of natural biological products has suggested a conceivable undesirable "therapeutic vicious circle" in routine "desensitization" techniques. It is alleged that relatively few patients are equally hypersensitive to the globulin and albumen fraction of the same pollen.[2] Theoretically, therefore, the

1 Lehman, A. J., and Hanzlik, P. J.: Proc. Soc. Exper. Biol. Med., 30:140-143 (Nov.), 1932.

* Part I of this series was printed in the February California and Western Medicine, page 116.

1 Feinberg, S. M.: J. A. M. A., 95:1665, 1930.

2 Rappaport, B. F., and Johnson, C. A.: Proc. Soc. Exper. Biol. and Med., 46:771, 1929.

offending pollen factor might be a species-specific protein, with no simultaneous hypersensitivity to the accompanying genus-specific, family-specific or relatively nonspecific plant products. Modern theorists are wondering if the injection of such collateral fractions to which the patient is not already hypersensitive, may not in time lead to the development of a collateral sensitivity to other plant species, thus inadvertently increasing the patient's environmental handicap. While this is solely a speculative fantasy, it is not entirely foreign to reported clinical experience.

Stanford University.

W. H. MANWARING,
Palo Alto.

(To Be Continued)

Hospitals: Association's Right to Benefits of Mechanic's Lien.—Remington's Compiled Statutes, Washington, Section 10320, authorizes a municipal corporation, which has contracted for the erection of designated public works, to retain a certain percentage of the moneys due the contractor "as a trust fund for the protection and payment of any person or persons, mechanic, subcontractor or material-man who shall perform any labor upon such contract or the doing of said work, and all persons who shall supply such person or persons or subcontractors with *provisions* and *supplies* for the carrying on of such work." The plaintiff hospital association contracted to furnish the medical, surgical, hospital and ambulance service, and first aid kits for the treatment of workmen injured in erecting a certain public work. The plaintiff, said the Supreme Court of Washington, is not entitled to the benefits of the statute quoted. While a mechanic's lien is a favorite of the law, the statute creating it cannot be so extended as to apply to cases which do not fall within its provisions. By no liberality of construction can it be said that, under the statute quoted, a physician or surgeon treating medically or surgically a laborer employed on the work would himself be a laborer; or that medicine, drugs, apparatus or bandages used in the performance of an operation would be "provisions" or "supplies" for the carrying on of such work. The services of the hospital, with its first aid attendants, x-ray machines, nurses and paraphernalia cannot be considered as "provisions" or "supplies" furnished to contractors or subcontractors for carrying on their work, in the absence of specific statutory authorization justifying that construction.—Western Clinic & Hospital Association vs. Gabriel Construction Company (Washington), 12 P. (2d) 417.

Electrocoagulation of Tonsils.—According to Balmer, the control of tonsillar bleeding in accordance with the basic principles of general surgery, is essential in the removal of tonsils. Faulty operative position and lack of a definite precise technic are greatly responsible for the majority of unsatisfactory postoperative results in tonsillectomy. The author's technic is as follows. The tonsil is swabbed with a 1:1000 epinephrin solution. The surface of the tonsil and the interior of the crypts are swabbed with a small amount of cocain hydrochlorid flake by means of a fine applicator tipped with cotton and moistened with a 1:6000 epinehrin solution and the excess of moisture squeezed out. This is repeated two or three times at two or three minute intervals. The electrocoagulation apparatus is employed, the meter reading about 3,000 milliamperes with the spark gaps slightly open. This will give a reading of from 250 to 300 milliamperes with the patient in the circuit. The indifferent electrode is connected to the metal chair on which the patient is seated. The proper needle is inserted into the tonsil substance approximately 4 millimeters; it should be kept about 4 or 5 millimeters away from the peripheral structures; sparking and surface fulguration should be avoided and the point should be directed toward the center of the fossa. In from one to three seconds a blanched area will appear around the needle. This process is repeated as many times as is necessary, usually from six to ten contacts. A small area of unblanched tissue, which is left between the punctures, allows the coagulated areas to coalesce and prevents overcoagulation and the possibility of too early separation of the coagulum. Bleeding points may be controlled by sparking the area. Electrosurgery, and electrocoagulation in particular, do not replace surgery in the removal of tonsils. They are better suited to selected cases. The combination of surgery and electrosurgery is the ideal method. Surgery will continue to be the method of choice; when it is contraindicated, electrosurgery may be considered as an appropriate and scientific aid to ordinary surgery. The surgeon should not be limited by lack of ability, knowledge, equipment or prejudice. There are many contraindications to electrocoagulation. Diathermocryptectomy, or removal of the cryptic portion of the tonsil, is a commendable, worthwhile procedure to be considered under circumstances in which a more conservative procedure is required. Electrocoagulation is a safe, ultraconservative procedure, requiring time, judgment, technical skill, patience and meticulous care.—*Northwest Medicine.*

Syphilis and Thyroid Disease.—Netherton reviews the literature relating to the association of syphilis and thyroid disease and analyzes sixty-two cases of this kind in an effort to evaluate the importance of syphilis as an etiologic factor in the production of thyroid dysfunction. He reports three cases in which syphilis produced a symptom complex which simulated that of hyperthyroidism and he expresses the opinion that some of the cases reported in the literature are of this type. A case of probable gumma of the thyroid is also reported. A careful examination to rule out neurosyphilis should be made in such cases. The author concludes that antisyphilitic treatment should not replace surgical intervention in cases of active hyperthyroidism in syphilitic individuals, as operation followed by antisyphilitic therapy will prevent the cardiac damage that may result from unnecessary delay. Syphilis does not interfere with the convalescence in these cases. Preoperative treatment is advisable but should not be too intensive. Patients having neurosyphilis associated with hyperthyroidism are poor surgical risks, especially if there is mental deterioration. Preoperative antisyphilitic treatment in these cases is indicated, as it is of definite value in case of tabes dosalis.—*American Journal of Syphilology.*

Food Tables.—Manville and Winchell present food tables giving the excess acid or base of foods. They state that foods may be classed into three main groups: excess acid-ash foods, consisting of meat, fish and cereals, some nuts, such as walnuts and peanuts, and some fruits, such as plums, prunes and cranberries; excess alkaline-ash foods, consisting of most fruits, most vegetables, milk and some nuts, such as almonds; and neutral food, consisting of butter, cornstarch, cream and, in general, most cooking fats and oils, and pure carbohydrates, such as sugar and tapioca. Those foods having the lowest buffer values are the cereals; those of intermediate value are the fruits and vegetables, while those having the highest values are the flesh foods. Notice should also be taken of the fact that cooking reduces the buffer value to as much as one-third of its raw value. The use of the acid-base foods will generally lie in those dietotherapeutic regimens in which dehydration is desired, as, for example, in epilepsy, nephritis with edema and obesity. Buffer value foods are useful in the dietary care of persons suffering from an excess or from a deficiency of hydrochloric acid in the stomach. They are also of value in the supervision of the dietaries of young children whose gastric acidity has not yet reached that of the adult.—*Northwest Medicine.*

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Practical Group Hospital Insurance*

The present broad application of the group hospitalization plan was initiated by the Baylor University Hospital in Dallas, Texas, almost three years ago. Although some forms of hospital insurance had been in effect for a longer period in various parts of the country, they were not so broadly applied as in Dallas. It was felt that the only way to determine the soundness and the feasibility of such a plan was to go to Texas and investigate its merits at first hand. Accordingly, the trip to Dallas and the investigation were undertaken, and first hand information was obtained.

The plan in operation at Baylor University Hospital assures hospital service when needed in a $5 private or two-bed room, operating room, anesthetic, laboratory examinations, medical and surgical dressings, hypodermic and all usual hospital service of undergraduate nurses, nurse supervisors, interns and house staff, during the period of hospitalization not to exceed twenty-one days. In case the assured party should necessarily be hospitalized more than twenty-one days, then he shall be entitled to a discount of 33⅓ per cent from the regular fees after the first twenty-one days. Plan does not include doctor's visits, either physician or surgeon, nor the service of a special private nurse, nor board for special nurse, nor x-ray work. If the higher priced room is desired it would apply as a credit of $5 a day on the cost of such higher priced room. The benefits do not apply in the case of purposely self-inflicted injury or obstetrical cases, but in such cases the assured shall be entitled hereunder to a 50 per cent reduction on regular hospital fees. Except for preliminary hospitalization pending diagnosis, the hospital is not prepared to care for and does not accept cases of pulmonary tuberculosis or chronic mental and nervous disorders, or virulent contagions, such as smallpox, etc. All such cases need treatment in special hospitals.

In case of epidemic, public disaster, or other conditions occasioning an overcrowding of the capacity of the hospital to such a degree that it is not possible to provide accommodations, and in case adequate accommodations cannot be secured elsewhere in the city, then in the face of such emergency it is agreed that the responsibility of the hospital under this contract shall be discharged by the refund to the assured of twice the amount that has been paid by the assured under this contract during the twelve months immediately preceding, and such payment shall constitute a full and final discharge of the obligations of the hospital hereunder. (On most days the hospital could handle an emergency additional load of seventy-five to one hundred, so there was no probability that such a necessity would occur.)

All members of the Dallas County Medical Society are eligible to use the facilities of Baylor University Hospital, and no patient can be admitted to Baylor University Hospital except under care and upon authorization of some member of the Dallas County Medical Society.

The benefits of the plan do not apply if the member is released or discharged from an employed group. Fees must be collected and paid as a group. Personal identification must be made by some authorized representative of the employer. This hospital originated the plan after serious research and study of all available facts, and it was first applied to teachers in the public schools of Dallas and Dallas County—about 1500. After the first year it was found that this group of employed persons presented an actuarial experience not profitable to the hospital. Reasons given were that the teachers were unemployed for two months of a year, and during that period had ample time to avail themselves of hospitalization for treatment of illnesses arising from the exacting demands of their profession. Applied on a broader basis, however, which included employees from all industrial and office groups, it has proved to be decidedly successful. The actuarial experience of this hospital was found to represent a proportion of less than 7 per cent of the total persons insured to date. In other words, less than 7 per cent of those so insured to date under this plan were treated at the hospital. Their average length of stay was three plus days, and the average income was close to $7 per day.

It was learned that at the beginning of the operation of this plan the hospital had available 156 beds, and after three years of operation with the plan, these beds are filled practically all the time. Some large wards have been reconstructed to provide such private rooms largely for the purpose of meeting the demand of insured patients. At this hospital it was learned that this plan unquestionably had increased the volume of business and, more important, substantially increased their proportion of income. The average cost per patient at this hospital last year was $5.11, and it is interesting to note that it operates on a self-supporting basis, having no endowment and no municipal support and receiving no income from any denominational group. It is not intended to convey the idea that the progress of this hospital during the past three years, as indicated in the paragraph above, was entirely due to the income from its insured groups. However, the superintendent emphasizes that this source of income has been a contributing factor of marked importance.

The business manager of a hospital informed me that at all times sufficient funds were available from monthly fees to meet the charges as they were incurred. He also estimated that if these patients had not been enrolled in the insurance plan the hospital would not have been able to collect more than 50 per cent of the cost of the care given.

At the time of the investigation, 6442 were members of the plan at this hospital. This hospital has definitely adhered to the policy of dealing directly with the group, through the employer or other representative, and has never employed any outside selling organization or middle-man representative.

The Dallas Methodist Hospital and the Fort Worth Methodist Hospital also were visited. Both were enthusiastic about the merits of the plan. In both instances there had been no period in which the funds available had not been sufficient to meet the hospital charges incurred by the members of the plan. Analysis of the hospital's financial records revealed the marked benefits which have come as a direct result of its operation. The director at the Dallas Methodist Hospital stated that in his opinion the benefits derived from the plan had enabled the hospital to operate without deficit, although they were in a serious financial plight before the plan was adopted.

It was interesting to compare the rates charged by both hospitals in Dallas, because the Baylor University Hospital employs no selling organization. The rate at that hospital is $6 per year, or 50 cents per month. One exception is that of a group of

* By Frank Van Dyk, M. D., executive secretary of the Hospital Council of Essex County, Newark, New Jersey, in *American Hospital Association Bulletin*, January, 1933.

school teachers for whom the plan was first adopted. It was found that because this group represented an actuarial experience unprofitable to the hospital the rates have recently been raised to $8 per year.

The Dallas Methodist Hospital charges $9 per year or 75 cents per month, of which $3 per year or 25 cents per month is retained by the selling organization. This means that the hospital nets an amount similar to that received by the Baylor University Hospital. The number enrolled under the plan at this hospital now is in excess of 6000, making a total of more than 12,000 in the city of Dallas.

The Dallas Methodist Hospital, although charging 75 cents per month, has experienced no difficulty in selling membership in the plan through the selling organization it employs. Several reasons are indicated why no sales resistance up to this point has been encountered because of the higher rate. They are enumerated as follows:

1. The sales organization is constantly active in the endeavor to increase membership.
2. Baylor only occasionally presents the opportunity to join to carefully selected groups.
3. Baylor does not accept every group of employees, while the Methodist Hospital is willing to accept groups which have been declined by Baylor.
4. Individuals are accepted by the Methodist Hospital, but not at Baylor.
5. The individual preference is for Methodist Hospital.
6. Methodist Hospital offers a contract which is presented to the individual and a patient is recognized as an individual rather than as a member of a group.

Baylor Hospital exercises great care in selecting groups to whom the insurance plan is offered. Employees who are underpaid and overworked are not considered good risks and applications are not solicited from such groups. No individuals are solicited or accepted at the hospital. An insured person must be a member of a group where identification is made by some authorized representative of the employer.

There are evidences in the community that this policy was not favorably received in some instances. The impression gained is that an insured person wants to be recognized as an individual and not as a unit of a group.

This hospital has not had any unpleasant or unsatisfactory reactions from its staff doctors, the patients, or from the public generally. It has now operated this plan for three years, and during this entire period there has been a constant increase in the number of persons insured and consequently a constantly increasing and profitable volume of business. No group of employees has decreased its number of insured members, but on the contrary there has been a growing number of those who have availed themselves of the benefits of this plan.

Although every member insured at this hospital pays a rate of 50 cents per month, all do not receive the same accommodations. Employees of the so-called lower classes, such as laborers, porters, etc., are given hospital treatment in ward beds at the rate of $3 per day. This discrimination has led to some criticism in the community. One employer group refused to join this hospital's insurance plan on that account and made application at the other hospital operating a similar plan without discrimination of type of accommodations.

It is evident that this arrangement, while perhaps desired from some viewpoints, does not contribute to a wholehearted approval on the part of the public.

At Baylor University Hospital no allowances are made for x-rays, but at the Dallas Methodist Hospital a 50 per cent discount is allowed.

Payments of fees may be made monthly, quarterly, semiannually or annually. The annual payment is $6 per year at this hospital.

Dr. J. H. Groseclose of the Dallas Methodist Hospital has pointed out the interesting and significant fact that while this plan unquestionably tended to increase utilization of capacity, the increased cost of the greater care rendered was small in comparison to the income. In other words, there was but little increase in overhead cost, yet the income was beyond full cost and thus substantial in comparison to the slightly increased cost of operation.

This hospital has an arrangement with an organization to handle the solicitation of applications, collections of fees, and the clerical work necessary to the operation of the plan. The hospital administrators are thoroughly satisfied with the arrangement and said there was no other way in which they could handle this work satisfactorily.

FORT WORTH METHODIST HOSPITAL

This hospital experimented with this plan last year, applying it only to school teachers. The result was not wholly satisfactory for the same reason as explained by Baylor Hospital. The hospital administrators first carried on this work without the assistance of the outside representatives but abandoned the idea of promoting the program themselves. Mr. C. Q. Smith, the superintendent, explained the reason therefor as follows: "First, we could see a mass of details in the future should a large membership be secured; second, we decided that the program is one of a sales proposition and requires the service of trained efficient salesmen if the maximum results are to be obtained. We feel that our job is to run a hospital, which, if properly done, consumes absolutely all of our time, and we do not have sufficient time to develop the hospitalization program as we feel it should be developed."

Since the beginning of this year outside help has been employed and the experience so far this year with but a few hundred members has proved profitable to the hospital. New applications are being received at the rate of approximately four hundred per month.

It is significant to note that the experience of this hospital with a few hundred insured persons has proved of profit to the hospital.

SUMMARY OF EXPERIENCE IN DALLAS AND FORT WORTH

In Dallas more than 12,000 persons are members of the group hospitalization plan.

Hospitals have increased utilization of capacity as a result of the plan.

The ratio of income per patient has increased despite the depression.

The number of insured persons is increasing rapidly.

The hospitals' experience indicates the work of promoting the plan should be carried on by some trained sales representative devoting exclusive time to his work.

Both employers and employees endorse the plan.

The medical profession generally has endorsed the plan because it enhances the opportunity to collect fees. There the one reservation is that in some instances it interferes with individual practice because hospitals operate the plan individually.

There should be no discrimination in providing type of accommodations for patients when all members pay similar fees.

Not only have hospitals benefited materially in a financial way, but the plan has increased the education of the public in regard to hospitalization.

Solicitation of applications should be confined to groups and individuals' applications should not be solicited except in a large measure so as to represent the average population. Members of the plan should be considered individually and so admitted to hospital rather than as a unit of a group, requiring identification of an employer. Otherwise, public reaction is indicated to be unfavorable.

The law of averages relative to persons requiring hospital care has applied to small numbers of groups as well as large numbers. This is not indicated, however, in small numbers of individuals.

Should one or more hospitals adopt this plan and others in the same community decline, hospitals with the plan will be favored and obtain a greater and more profitable volume of business at the expense of other hospitals not operating the plan.

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In case of epidemic, public disaster, or other conditions occasioning an overcrowding of the capacity of the hospital to such a degree that it is not possible to provide accommodations, and in case adequate accommodations cannot be secured elsewhere in the city, then in the face of such emergency it is agreed that the responsibility of the hospital under this contract shall be discharged by the refund to the assured of twice the amount that has been paid by the assured under this contract during the twelve months immediately preceding, and such payment shall constitute a full and final discharge of the obligations of the hospital hereunder. (On most days the hospital could handle an emergency additional load of seventy-five to one hundred, so there was no probability that such a necessity would occur.)

All members of the Dallas County Medical Society are eligible to use the facilities of Baylor University Hospital, and no patient can be admitted to Baylor University Hospital except under care and upon authorization of some member of the Dallas County Medical Society.

The benefits of the plan do not apply if the member is released or discharged from an employed group. Fees must be collected and paid as a group. Personal identification must be made by some authorized representative of the employer. This hospital originated the plan after serious research and study of all available facts, and it was first applied to teachers in the public schools of Dallas and Dallas County—about 1500. After the first year it was found that this group of employed persons presented an actuarial experience not profitable to the hospital. Reasons given were that the teachers were unemployed for two months of a year, and during that period had ample time to avail themselves of hospitalization for treatment of illnesses arising from the exacting demands of their profession. Applied on a broader basis, however, which included employees from all industrial and office groups, it has proved to be decidedly successful. The actuarial experience of this hospital was found to represent a proportion of less than 7 per cent of the total persons insured to date. In other words, less than 7 per cent of those so insured to date under this plan were treated at the hospital. Their average length of stay was three plus days, and the average income was close to $7 per day.

It was learned that at the beginning of the operation of this plan the hospital had available 156 beds, and after three years of operation with the plan, these beds are filled practically all the time. Some large wards have been reconstructed to provide such private rooms largely for the purpose of meeting the demand of insured patients. At this hospital it was learned that this plan unquestionably had increased the volume of business and, more important, substantially increased their proportion of income. The average cost per patient at this hospital last year was $5.11, and it is interesting to note that it operates on a self-supporting basis, having no endowment and no municipal support and receiving no income from any denominational group. It is not intended to convey the idea that the progress of this hospital during the past three years, as indicated in the paragraph above, was entirely due to the income from its insured groups. However, the superintendent emphasizes that this source of income has been a contributing factor of marked importance.

The business manager of a hospital informed me that at all times sufficient funds were available from monthly fees to meet the charges as they were incurred. He also estimated that if these patients had not been enrolled in the insurance plan the hospital would not have been able to collect more than 50 per cent of the cost of the care given.

At the time of the investigation, 6442 were members of the plan at this hospital. This hospital has definitely adhered to the policy of dealing directly with the group, through the employer or other representative, and has never employed any outside selling organization or middle-man representative.

The Dallas Methodist Hospital and the Fort Worth Methodist Hospital also were visited. Both were enthusiastic about the merits of the plan. In both instances there had been no period in which the funds available had not been sufficient to meet the hospital charges incurred by the members of the plan. Analysis of the hospital's financial records revealed the marked benefits which have come as a direct result of its operation. The director at the Dallas Methodist Hospital stated that in his opinion the benefits derived from the plan had enabled the hospital to operate without deficit, although they were in a serious financial plight before the plan was adopted.

It was interesting to compare the rates charged by both hospitals in Dallas, because the Baylor University Hospital employs no selling organization. The rate at that hospital is $6 per year, or 50 cents per month. One exception is that of a group of

* By Frank Van Dyk, M. D., executive secretary of the Hospital Council of Essex County, Newark, New Jersey, in *American Hospital Association Bulletin*, January, 1933.

school teachers for whom the plan was first adopted. It was found that because this group represented an actuarial experience unprofitable to the hospital the rates have recently been raised to $8 per year.

The Dallas Methodist Hospital charges $9 per year or 75 cents per month, of which $3 per year or 25 cents per month is retained by the selling organization. This means that the hospital nets an amount similar to that received by the Baylor University Hospital. The number enrolled under the plan at this hospital now is in excess of 6000, making a total of more than 12,000 in the city of Dallas.

The Dallas Methodist Hospital, although charging 75 cents per month, has experienced no difficulty in selling membership in the plan through the selling organization it employs. Several reasons are indicated why no sales resistance up to this point has been encountered because of the higher rate. They are enumerated as follows:

1. The sales organization is constantly active in the endeavor to increase membership.
2. Baylor only occasionally presents the opportunity to join to carefully selected groups.
3. Baylor does not accept every group of employees, while the Methodist Hospital is willing to accept groups which have been declined by Baylor.
4. Individuals are accepted by the Methodist Hospital, but not at Baylor.
5. The individual preference is for Methodist Hospital.
6. Methodist Hospital offers a contract which is presented to the individual and a patient is recognized as an individual rather than as a member of a group.

Baylor Hospital exercises great care in selecting groups to whom the insurance plan is offered. Employees who are underpaid and overworked are not considered good risks and applications are not solicited from such groups. No individuals are solicited or accepted at the hospital. An insured person must be a member of a group where identification is made by some authorized representative of the employer.

There are evidences in the community that this policy was not favorably received in some instances. The impression gained is that an insured person wants to be recognized as an individual and not as a unit of a group.

This hospital has not had any unpleasant or unsatisfactory reactions from its staff doctors, the patients, or from the public generally. It has now operated this plan for three years, and during this entire period there has been a constant increase in the number of persons insured and consequently a constantly increasing and profitable volume of business. No group of employees has decreased its number of insured members, but on the contrary there has been a growing number of those who have availed themselves of the benefits of this plan.

Although every member insured at this hospital pays a rate of 50 cents per month, all do not receive the same accommodations. Employees of the so-called lower classes, such as laborers, porters, etc., are given hospital treatment in ward beds at the rate of $3 per day. This discrimination has led to some criticism in the community. One employer group refused to join this hospital's insurance plan on that account and made application at the other hospital operating a similar plan without discrimination of type of accommodations.

It is evident that this arrangement, while perhaps desired from some viewpoints, does not contribute to a wholehearted approval on the part of the public.

At Baylor University Hospital no allowances are made for x-rays, but at the Dallas Methodist Hospital a 50 per cent discount is allowed.

Payments of fees may be made monthly, quarterly, semiannually or annually. The annual payment is $6 per year at this hospital.

Dr. J. H. Groseclose of the Dallas Methodist Hospital has pointed out the interesting and significant fact that while this plan unquestionably tended to increase utilization of capacity, the increased cost of the greater care rendered was small in comparison to the income. In other words, there was but little increase in overhead cost, yet the income was beyond full cost and thus substantial in comparison to the slightly increased cost of operation.

This hospital has an arrangement with an organization to handle the solicitation of applications, collections of fees, and the clerical work necessary to the operation of the plan. The hospital administrators are thoroughly satisfied with the arrangement and said there was no other way in which they could handle this work satisfactorily.

FORT WORTH METHODIST HOSPITAL

This hospital experimented with this plan last year, applying it only to school teachers. The result was not wholly satisfactory for the same reason as explained by Baylor Hospital. The hospital administrators first carried on this work without the assistance of the outside representatives but abandoned the idea of promoting the program themselves. Mr. C. Q. Smith, the superintendent, explained the reason therefor as follows: "First, we could see a mass of details in the future should a large membership be secured; second, we decided that the program is one of a sales proposition and requires the service of trained efficient salesmen if the maximum results are to be obtained. We feel that our job is to run a hospital, which, if properly done, consumes absolutely all of our time, and we do not have sufficient time to develop the hospitalization program as we feel it should be developed."

Since the beginning of this year outside help has been employed and the experience so far this year with but a few hundred members has proved profitable to the hospital. New applications are being received at the rate of approximately four hundred per month.

It is significant to note that the experience of this hospital with a few hundred insured persons has proved of profit to the hospital.

SUMMARY OF EXPERIENCE IN DALLAS AND FORT WORTH

In Dallas more than 12,000 persons are members of the group hospitalization plan.

Hospitals have increased utilization of capacity as a result of the plan.

The ratio of income per patient has increased despite the depression.

The number of insured persons is increasing rapidly.

The hospitals' experience indicates the work of promoting the plan should be carried on by some trained sales representative devoting exclusive time to his work.

Both employers and employees endorse the plan.

The medical profession generally has endorsed the plan because it enhances the opportunity to collect fees. There the one reservation is that in some instances it interferes with individual practice because hospitals operate the plan individually.

There should be no discrimination in providing type of accommodations for patients when all members pay similar fees.

Not only have hospitals benefited materially in a financial way, but the plan has increased the education of the public in regard to hospitalization.

Solicitation of applications should be confined to groups and individuals' applications should not be solicited except in a large measure so as to represent the average population. Members of the plan should be considered individually and so admitted to hospital rather than as a unit of a group, requiring identification of an employer. Otherwise, public reaction is indicated to be unfavorable.

The law of averages relative to persons requiring hospital care has applied to small numbers of groups as well as large numbers. This is not indicated, however, in small numbers of individuals.

Should one or more hospitals adopt this plan and others in the same community decline, hospitals with the plan will be favored and obtain a greater and more profitable volume of business at the expense of other hospitals not operating the plan.

Aside from the benefits to the hospital already indicated, advantages only possible by a joint operation of the plan by all hospitals in the community are enumerated as follows:

1. It would provide the opportunity for members of the plan to go to the hospital of their choice, thus creating no change from the present situation regarding selection of hospitals. In case of accident the injured member could be brought to the nearest hospital with full assurance that he could obtain full advantage of the plan.
2. It would avoid unfair competition should one or a few hospitals offer care under this plan.
3. There would be no interference with the practice of any physician or surgeon.
4. Remittances by employed groups would go into one fund rather than into several if operated individually. This would avoid confusion and annoyance on the part of employers or those who collect the receipts.
5. Sales resistance would be materially lowered due to the fact that there would be no compulsion to accept service in a hospital not of their choice.
6. The hospital would not be required to expend any effort other than to receive and care for the patient after identity was established, and receive prompt remittance of the established charges.

As a result of our investigation and study the following points of benefit to the hospital and the public are indicated and summarized:

1. It enables employed persons of average means to be assured of adequate hospital care at no other cost than a monthly payment which averages no more than the cost of a newspaper a day.
2. It enables them to obtain the scientific advantages of hospital service at an early stage of illness and thus avoid advance of illness to a degree where intensive hospitalization or medical care is required.
3. It avoids the necessity of the patient's going into debt, or accepting charity service.
4. It enables him to retain his self-respect and saves him from the spectre of financial insecurity.
5. It enables the hospital to place its financial structure on a more permanent basis.
6. It tends to increase occupancy of private accommodations.
7. It yields an income in excess of the cost of care.
8. It enables the hospital to admit to private accommodations many persons who otherwise would receive ward service.
9. It preserves the independent practice of medicine and enables the doctor to establish and maintain private relationship between the patient and himself.
10. It enables the doctor to have the advantage of hospitals' scientific facilities which otherwise might not be obtained because of the inability of the patient to pay for such service.
11. It enables the doctor to collect his fees more readily.
12. It also enables the doctor to retain many of his patients who might otherwise be lost to him, because of their inability to pay for private hospital service.

* * *

Resolution Adopted by the Kern County Medical Society

WHEREAS, There has recently been released for publication a report by a national committee appointed to investigate the costs of medical care; and

WHEREAS, The majority report of that committee recommends the adoption of a plan whereby the expenses of medical care would be partially or wholly defrayed by taxation; and

WHEREAS, It is customary for the regular medical profession to donate their services in caring for the indigent sick, which service is obviously not an obligation of the doctors but is clearly a duty of the state; and

WHEREAS, The use of taxation to finance any system of medical care would, inevitably, lead to political domination, with its corollaries, favoritism and inefficiency; and

WHEREAS, Years of experience have demonstrated that a salary basis of compensation for the physician leads, without exception to the loss of that confidential relationship between doctor and patient and without which successful treatment is frequently impossible; and

WHEREAS, The use of state funds to partially or completely defray the costs of medical care of the small wage earner, while taking no cognizance of his more elemental requirements such as food, clothing and housing seems unreasonable, inconsistent, and constitutes, in fact, class legislation; and

WHEREAS, The principal minority report of said committee, signed entirely by physicians in active practice, representing the opinion of men who have learned their facts first hand and are, therefore, in a position to give more practical advice, has been approved by the American Medical Association; now, therefore, be it

Resolved, That this society does hereby endorse the principal minority report of said committee, which, among others, makes the following recommendations:

1. That government competition in the practice of medicine be discontinued.
2. That government care of indigents be expanded with the ultimate object of relieving the medical profession of that burden.
3. That united attempts be made to restore the general practitioner to the central place in medical practice.
4. That any plan involving a change in present methods of medical practice be rejected unless proved capable of being fitted into present institutions and agencies.

In its Medical Economics department, the *Journal of the American Medical Association* of February 4 takes up the subject of its twelfth discussion, "The Health Preservation Foundation of Los Angeles." The comments of the *Journal of the American Medical Association* thereon are here reprinted:

The merits of the plan are:

1. Insistence on membership in medical and dental associations insures a fairly high standard of service and professional ethics.

2. It will provide medical service for low income groups with less financial burden to the patients and greater security of at least a limited payment to the practitioner.

3. It claims to insure freedom of choice of physicians within a comparatively large group.

4. According to the initial announcement, it would seem to avoid the evils of lay control and retain all the management within the medical profession.

Its principal defects are:

1. It tends to divide the membership of the county medical society and to create a preferred group controlling a section of the market for medical services secured through solicitation of members and their adherence to a contract.

2. Such a partial monopolization of any considerable section of the field for medical practice in any locality would be in the nature of "unfair competition" with those excluded, especially when such exclusion is not based on qualifications or the opinion of patients but on membership in a previously existing organization, and when the number of physicians admitted is so closely restricted.

3. It would be a miracle if such a situation did not result in divisions and controversy within the county medical society.

4. It aligns certain civic, charitable, social, business and industrial organizations with a selected percentage of the profession. The inclusion of this element, with the use of a "representative who is capable of contacting the lay individual of minimum income," forecasts the use of pressure and advertising as means of promotion.

Influenza Epidemic in England.—Deaths from influenza in England and Wales totaled 1041 the week preceding January 19, compared with 681 the previous week, newspapers reported. As a result of the spreading of the disease, all schools in Swansea were to have been closed, following similar action in other towns, it was stated.—*Journal of the American Medical Association*, January 28, 1933.

CANCER COMMISSION OF THE C. M. A.

The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of California and Western Medicine (see front cover directory). This column is conducted by the Secretaries of the Commission.

REPORT OF COMMITTEE ON EYE, EAR, NOSE AND THROAT TUMORS*

II

NOSE AND THROAT TUMORS

While in general certain well defined symptoms and signs exist in the diagnosis of malignancy of the nose and throat, biopsy is usually essential to avoid confusion with tuberculosis and lues. Blood counts and smears eliminate leukemia.

Following is a summary of the symptoms, diagnosis and treatment of the more common tumors of the nose and throat.

TUMORS OF THE NOSE AND ACCESSORY SINUSES

Benign Tumors.—The commonest benign growth of the nose is the ordinary so-called nasal polyp. This is an oval, smooth, pedunculated, gelatinous-appearing mass of varying size and contour, usually springing from the middle turbinate or paranasal sinuses. Frequently it is nothing more than edematous mucous membrane. The common symptoms are nasal obstruction, discharge, mouth breathing, cough, sneezing or asthma. It is easily diagnosed from its appearance or location, and the treatment is surgical removal. Accompanying sinusitis usually requires attention to prevent recurrence.

A number of less common benign neoplasms may be mentioned: (1) fibroma; (2) enchondroma. The committee regards these as best treated by surgical excision. (3) Angioma, presenting as a vascular, sessile excrescence on the septum. For this growth strangulation by cold snare and cautery, enucleation, or occasionally destruction by radium have been successful.

The benign tumors so far mentioned are not in any special sense precancerous.

One rare growth—epithelial papilloma—must be regarded as precancerous. It readily recurs after incomplete removal or destruction, and carcinoma has been observed to occur in the recurrences. Due to their small size, they produce few symptoms. It is recommended that they be excised and that the base after excision be cauterized or electrodesiccated.

Malignant Conditions.—Malignant tumors of the nasal passages include both sarcomas and carcinomas, (rarely endotheliomas).

1. The true sarcomas are stated by Ewing to be chiefly lymphosarcomas and myxosarcomas arising from the mucosa. Fibrosarcomas are reported; osteogenic sarcomas are rarely observed; and occasionally tumors presenting mixed tissues, chondromyxosarcomas, etc.) may be found.

2. Among the carcinomas are included a number of histological varieties presenting variations in clinical course and especially in radiosensitivity.

(*a*) Papillary carcinoma.

(*b*) Carcinoma resembling in histologic appearance the basal cell type seen on the skin, ordinarily of small growth and locally destructive, but seen eventually to present lymph gland metastases.

(*c*) Squamous cell carcinoma, behaving as this tumor does elsewhere in the body.

(*d*) Cylindrical cell carcinoma, which may be of adenocarcinomatous form, usually highly malignant.

(*e*) Round cell carcinoma. This variety doubtless includes many tumors which are diagnosed sarcoma. Such tumors are of a high degree of malignancy and are quite radiosensitive.

3. Endothelioma may rarely occur, is of low radiosensitivity, but rather slowly growing and late to metastasize, but invading bone and so occasionally leading to intracranial involvement.

Diagnosis.—The early symptoms of new growths are those of inflammation. Any of these malignant tumors may first call attention to themselves by purulent discharge (especially, persistent unilateral discharge), epistaxis, or later by tension or neuralgic pain. These symptoms, of course, are not pathognomonic of neoplasm. They may and do commonly arise from chronic inflammatory processes or from the presence of benign tumors. Later, symptoms more definitely diagnostic of new growth are: deformity, swelling of the walls of the sinus into the nose or mouth or orbit or cheek; or, still later, destruction of the walls, ulceration, and metastases. The generally poor prognosis of nasal tumors is in all probability due to the fact that diagnosis is not made until these later signs appear. It is important, therefore, that investigation for the positive presence of tumor be made of suspected areas, giving attention to earlier signs, namely, nasal discharge, epistaxis and neuralgic pain, to which should be added loosening of the upper teeth, occasionally suggesting an adamantine tumor as well as cancer of the antrum with extension through the floor.

The committee is unanimous that biopsy should be taken in all suspected cases, always remembering that it is very easy to include in biopsy only overlying granulation tissue, and so, fail in the diagnosis of a tumor. Furthermore, any nose or throat tissue removed at an operation should have histological examination.

The committee recommends that sinus x-rays be taken in all suspected cases. In elderly persons, increased unilateral density is suggestive but is not diagnostic of cancer unless bony walls are eroded. Trocar biopsy may be used if the growth has eroded into the mouth or nose. If not, a puncture may be made under the lower turbinate through the medial antral wall and a specimen obtained. Should this fail an opening in the canine fossa permits biopsy, radium insertion if positive and the subsequent surgical cleanup by enlarging it if desired. Early biopsy is preferred to waiting for evidence of bony erosion as this last means a well advanced case.

Treatment.—For any malignancy of the nasal passages, complete surgical removal is the ideal treatment. When diagnosis has been made sufficiently early so that the chance for successful surgical excision is good, this should be the aim. Many, perhaps most, malignant tumors of the nose are radiosensitive in greater or less degree. In line with the plan of attack recommended for many malignancies elsewhere, the committee recommends preliminary external irradiation in all cases, surgery (including cautery and electrocoagulation methods) in operable cases, radiation therapy in inoperable.

The committee strongly urges that irradiation, including dosage and method selected (x-ray, external radium, interstitial radium), be planned as accurately as is surgery and should be attempted only by those specially trained and experienced.

* Part I of this Report, dealing with tumors of the eye, was printed in the February CALIFORNIA AND WESTERN MEDICINE, page 122.

Lymph-gland Metastases.—In the case of tumors with recurrences or with tendency to metastasize, it is believed that the neck should be irradiated in all cases; and that when the primary tumor has been eradicated or when there is reasonable hope of so doing, palpable neck glands demand surgical neck dissection with or without irradiation. Metastasis in cancer of the antrum is rare. In the presence of intractable and incurable tumors, the possibility of relief by injection or section of sensory nerves should be borne in mind.

MALIGNANT TUMORS OF THE TONSIL AND PHARYNX

Epidermoid carcinoma is by far the commonest tumor of this region (five to one), the majority of these tumors having well recognized squamous features. It may arise from the soft palate, pillars, tonsil—in fact, from any mucous membrane. There is, however, also a fairly large group of carcinomas (transitional cell carcinoma and "lympho-epithelioma") in which the epidermoid features are well nigh absent or entirely lacking. Neither give rise to local pain early. The definite squamous type grows with rapidity and ulcerates, giving pain and bleeding. These have the appearance of squamous carcinoma of any mucous membrane.

In the other group (transitional cell carcinoma), the growth of the primary tumor is slow but metastasis occurs very early; bleeding and ulceration are late, and frequently the earliest symptom of any trouble is enlarged cervical glands. Therefore, any case with enlarged cervical glands should have a thorough nose and throat examination, remembering that the primary tumor may be so small and insignificant as to avoid detection. This type also frequently gives rise to bony and visceral metastases. It must be remembered that tumors of the nasopharynx most frequently do not give rise to local symptoms, but to symptoms which may be referred to the eye or ear or to neuralgic pains over the distribution of the fifth nerve. Practically all these tumors are sensitive to radiation although the histologic picture may not bear out that assumption.

Lymphosarcoma is a common tumor also, presenting the same clinical course when encountered here as elsewhere and equally sensitive to radiation. Palliation of symptoms and prolongation of life may be obtained, but seldom, if ever, a cure.

In examining for tumors in this region, palpation of the tonsillar fossae and the nasopharynx with the finger often gives valuable information. A tumor may sometimes be felt when it can be seen only with difficulty. Palpation is especially valuable to the general practitioner not versed in the use of mirror and endoscopes.

Treatment.—The fact that all of these tumors are sensitive to radiation suggests that it must be a prominent feature in the treatment. Surgical removal because of location in most instances is out of the question. External radiation, interstitial radiation and coagulation or cauterization, with proper case selection, have all been used with benefit. It must be remembered that hemorrhage following treatment of the primary lesion is a great possibility and so, ligation of the external carotid artery may be necessary.

For the cervical nodes, external radiation should always be given and this will usually give some indication as to the nature of the primary tumor by the response that occurs. If biopsy on the neck must be done to determine the type of tumor, the committee suggests that a progressing tumor be not excised for a piece of tissue but that a single node should be removed. Radical neck dissection in the anaplastic types usually is followed by recurrences. Therefore, radiation is advised. In most of the adult types, when the primary tumor has been adequately cared for, radical neck dissection should be performed. All cases for palliation should have only radiation.

Another tumor occasionally observed arising from the palate, buccal mucosa, alveolar border, the nares, the base of the tongue and even the face and lips, lacrimal gland and larynx, is the so-called mixed tumor of salivary gland type. The symptoms usually are mechanical, the tumor presenting itself as a single movable, circumscribed nodule, lying free under the skin or mucous membrane. In almost all locations about the mouth, this tumor is amenable to surgical excision by knife or cautery, without the production of serious deformity. If complete surgical excision cannot be accomplished, it should be treated by radiation.

Fibroma (rare), sometimes called fibrosarcoma because of its histologic picture, is most commonly seen in the nasopharynx. This is a tumor usually of boys between the ages of ten and twenty. It is benign in the sense that it does not metastasize, but it has rapid infiltrative growth with a well marked blood supply. Radiation has fair possibilities of palliation, and some cures have been accomplished by this means alone. This tumor usually makes itself known by obstruction to breathing and by bleeding.

2. Melanoma is another rare condition, rapidly growing, a pigmented, nodular, soft, vascular tumor, metastasizing so early that prognosis is almost universally hopeless. Massive cauterization is recommended and radium packs may control the growth for a time. Surgical excision is apt to be complicated by excessive hemorrhage and should not be attempted, at least until after adequate preoperative radiation.

LARYNX

Hoarseness is the one important early symptom of laryngeal carcinoma and demands early laryngoscopy. Carcinoma must be carefully distinguished from simple papilloma, tuberculosis and lues. The committee believes that biopsy is in order to establish diagnosis.

In carcinoma of the larynx one must distinguish between intrinsic and extrinsic lesions. For extrinsic lesions, surgery is usually out of the question, and treatment must consist of radiation. Tumors have been cured by this method. Furthermore, preliminary radiation of extrinsic laryngeal cancer may so alter it as to make the growth operable. Certainly the greatest palliation is obtained by radiation. For intrinsic lesions of the larynx, surgery offers the best chance of cure, preferably following preliminary irradiation. In selected cases of early intrinsic cancer, laryngofissure plus radiation may offer as much chance of cure as laryngectomy.

SUMMARY

1. Malignant tumors of the nasal passages do not give rise to characteristic symptoms in their early curable stages. Chronic nasal discharge or epistaxis or neuralgic pain in the region of the sinus should not be accepted as caused by inflammatory disease until malignancy has been ruled out.

2. The presence of symptoms referable to the eye or ear or the distribution of the fifth nerve require thorough nose and throat examination for possible malignancy. Furthermore, enlarged cervical nodes are so frequently the earliest symptom of malignancy in the nose and throat that their presence also requires thorough nose and throat examination.

3. Biopsy is essential to make a diagnosis.

4. Tumors posterior to the anterior tonsillar pillar are frequently very radiosensitive; and it would appear that our greatest hope in controlling these lesions lies in the field of radiation.

Respectfully submitted,

COMMITTEE ON EYE, EAR, NOSE AND THROAT TUMORS:

Dewey R. Powell, Chairman
Frank S. Baxter, Secretary
Hans Barkan
Wallace R. Briggs
Charles Wm. Brown
A. E. Edgerton
Harold A. Fletcher
Walter Scott Franklin
H. B. Graham
W. D. Horner
George N. Hosford
Simon Jesberg,
J. Roy Jones
George H. Kress
Robert C. Martin
C. H. Montgomery
Roy F. Nelson
Otto H. Pflueger
F. H. Rodenbaugh
E. C. Sewall
Milton H. Shutes
Henry J. Ullmann

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

JOSEPH M. KING.....President
GEORGE G. REINLE.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICES

Hotel Del Monte

Rates for Annual Session, April 24-27, 1933

The following rates are quoted, American Plan:

Single room with bath (one person), $9 per day.

Double room with bath (two persons), $8 each person per day.

Two single rooms, bath between (two persons), $8.50 each person per day.

Two double rooms, bath between (four persons), $7.50 each person per day.

Two double rooms, bath between (six persons, bed for each), $7 each person per day.

A few rooms without bath on the fourth floor are available. Rates secured from the hotel.

* * *

Delinquency Reason for Discontinuance of Journal. "If the annual assessment of dues," which Chapter X, Section 1, of the By-Laws states is payable on January 1, "is not paid on or before April 1 of any year, such member shall automatically lose his membership in the California Medical Association as of April 1 of such year."

Loss of membership includes loss of CALIFORNIA AND WESTERN MEDICINE. Names of delinquent members are each year removed from the April mailing list, and while "the Council of this Association in its discretion upon payment of such unpaid dues accruing thereafter, may at any time reinstate such member" missing numbers of CALIFORNIA AND WESTERN MEDICINE which have been lost through such delinquency cannot be supplied on request of the reinstated member, as only a small excess over the actual number of names on each mailing list is ordered.

Remember the date of delinquency, *April 1.* Guard against loss of your state journal by paying your annual dues now.

COMPONENT COUNTY MEDICAL SOCIETIES

ORANGE COUNTY

The regular February meeting of the Orange County Medical Society was held at 8 p. m. in the chapel of the Orange County General Hospital. President Wallace presided, and because of the length of the business meeting the scientific program was held first.

Dr. W. W. Roblee of Riverside gave a great deal of information of the medical economics and urged the association to take more interest in medical politics and adverse assembly bills.

Dr. Harry Zaiser, who attended the last Council meeting, reported on the narcotic law.

Dr. H. Wiley and Mr. B. Read spoke briefly on the *Public Health League of California,* explaining its purpose and how it functions. On motion, a committee was appointed to further study the league.

Dr. G. Wendell Olson gave an instructive talk on the cause and symptoms of bronchial asthma. Dr. M. W. Hollingsworth spoke on the treatment.

During the business meeting that followed, the report of the Auditing Committee was accepted. The first reading of six new applications for membership was heard. Following the recommendation of the board of managers, Dr. Frank Ashmore was reinstated to full membership by ballot.

WALDO S. WEHRLY, *Secretary.*

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RIVERSIDE COUNTY

Plans were launched by the Riverside County Medical Society at a joint meeting with the Woman's Auxiliary at the Mission Inn to bring the 1934 convention of the California Medical Association to Riverside.

The meeting, which was preceded by a dinner, provided one of the most gala occasions the medical fraternity has ever had in Riverside.

It was decided to extend the invitation for 1934 at the House of Delegates when the California Medical Association meets in Del Monte in April. Every effort will be made to induce the Association to select Riverside.

The chief speaker on the program was Dr. Joseph M. King, president of the State Association, who called attention to the bills in the legislature that have to do with medical problems and public health. Doctor King discussed the bills from the standpoint of the value they have to the public and taxpayer.

Mrs. F. E. Coulter, president of the Woman's Auxiliary of the State Association, preceded Doctor King and spoke on what the auxiliary can do to help the Association.

Mr. Ben H. Read, executive secretary of the Public Health League of California, spoke briefly on the purpose of the league, which "is to unite in one group representatives of the numerous medical, dental, nursing, pharmaceutical, hospital, and lay organizations which have a common interest in furthering the welfare of scientific care of the sick, preventing disease and in reducing as much as possible the large and increasing expenditures of public funds for medical charity."

Dr. W. W. Roblee delivered a rather humorous talk on *What Wives Should Know About Their Husbands' Business.*

Senator Leonard J. Difani, a special guest, spoke briefly on the problems of the legislature and the need of economy in lightening the burdens of the taxpayer.

THOMAS A. CARD, *Secretary.*

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SAN BERNARDINO COUNTY

A regular meeting of the San Bernardino County Medical Society was held at the County Hospital in San Bernardino on Tuesday, February 7, at 8 p. m. About fifty members were present.

The meeting was called to order by the president, and the application of Dr. S. S. Pond of Patton was voted on and accepted.

The following program of the evening was given: *Skin Tests in the Diagnosis and Treatment of Allergic Diseases* by Dr. George Piness of Los Angeles. *The Use of Diet in the Identification and Control of Food Allergies* by Miss Jane Dale, Ph. D., consulting dietitian of Los Angeles. *Management of the Asthmatic State* by Dr. Julian Cohn of Los Angeles.

Discussion was opened by Dr. Hyman Miller of Los Angeles.

A. T. GAGE, *Secretary Pro Tem.*

SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held on Thursday, February 2, in the Medico-Dental clubrooms, 242 North Sutter Street, Stockton. The meeting was called to order at 8:15 p. m. by President Doughty.

President Doughty gave a brief report of the joint meeting conducted by the Napa County Society in Oakland recently, which was attended by Doctors Doughty, Broaddus, O'Connor, and Van Meter, of our society.

Doctor Kaplan, chairman of the Committee on Social Problems, gave a report showing the contacts which are being made and outlining the methods of study and investigation. He reported much work has been done to date, and pleaded for more coöperation from the members in this important study.

Dr. Fred DeLappe of Modesto, councilor for this district of the California Medical Association, announced the coming convention of the state society and urged all who could to attend. The doctor spoke at length on the matter of membership, to show that the increase is not proportionate to the increase in number of licentiates in the state. He reviewed the work of the Cancer Commission and the Public Relations Commission, and also called attention to the many bills before this legislature concerned with medical conditions.

The scientific paper of the evening was read by Dr. Leo P. Bell of Sacramento on the subject of *The Results of Operative Procedure on the Stomach and Duodenum for Cure of Gastric and Duodenal Ulcer.* Doctor Lawson of Sacramento first demonstrated a number of slides, prepared from x-ray pictures, to show the possibility of diagnosing and locating the site of these ulcers.

Doctor Bell especially dealt with the matter of when to operate and what type of operation to use. He was speaking in an effort to clarify the relation between the internist and the surgeon.

The subject was discussed by Doctors Bollinger, Lynch, Sheldon, and Bell.

The meeting was adjourned at 10:30 o'clock and refreshments served.

C. A. BROADDUS, *Secretary.*

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SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held in the Bissell auditorium of the Cottage Hospital on Monday, February 13, with Presiding Geymann presiding.

Dr. Rexwald Brown gave a most comprehensive and enlightening report on the findings of the Five-Year Committee appointed to investigate the costs of medical care. The paper was so timely and interesting that it was moved, seconded and carried, that the secretary have sufficient copies printed to distribute to the membership.

The paper was discussed by Doctors Main, Freidell, Koefod, and Ullmann.

The society then went into executive session and Doctor Freidell spoke regarding a course of lectures to be given by the Merchants' Credit Association on *Problems of the Doctor.* He introduced Mr. Remele of the Merchants' Credit Association, who gave a brief résumé of what the course would cover and stated that it was to be given especially to the secretaries of the doctors, and his principal objective was to find out if a sufficient number of the membership would be interested in such a course. After his explanation it was ascertained that there would be a sufficient number interested and it was decided that further arrangements would be made in the near future.

Doctor d'Alessio read a copy of the proposed Bliss bill regarding county hospitals. This was discussed by Doctors Sansum, Ullmann, Henderson, Eder, Freidell, Sink, and Brown.

Doctor Ullmann, as councilor for this district, advised that no action be taken at this time in that should the society make recommendations on any proposed bill at this time so many amendments could be made that the meaning of the bill would be completely changed. He also stated that the state society would study carefully all the proposed bills just after the time when no more new bills could be presented to the legislature. At that time, should the state society deem it necessary to have help from the component county society, the county society would be notified. As this matter is already being discussed by the Public Relations Committee, it was moved, seconded and carried, that the whole matter be left to them.

Doctor Coblentz spoke upon the conditions in the Santa Maria Hospital and at his request it was moved, seconded and carried, that the president appoint a committee to formulate rules and regulations for the management of the hospital. If these rules and regulations are adopted by the society they will be presented to the Board of Supervisors with recommendations for their adoption.

The president stated that Sister Winifred of the St. Francis Hospital desired a set of rules applicable to both hospitals for all dispensary cases. This was referred to the Public Relations Committee.

WILLIAM H. EATON, *Secretary.*

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SANTA CRUZ COUNTY

The annual business meeting of the society was held on December 13, 1932. It was decided to continue the successful method of holding monthly meetings at the Hotel Rio del Mar at Aptos. This being a central location for all members, larger attendance has been noted. The following officers were elected to serve during 1933: President, J. Harrington of Santa Cruz; first vice-president, S. P. Tipton of Watsonville; second vice-president, S. W. Dowling of Santa Cruz; secretary-treasurer, S. B. Randall of Santa Cruz; censor to 1935, W. E. Fehliman of Santa Cruz; delegate, L. M. Liles of Watsonville; alternate, F. P. Shenk of Santa Cruz.

At the December meeting of the society the speakers of the evening were: Doctors George W. Pierce and Gerald O'Connor of San Francisco, who presented an illustrated talk on *Infections and Injuries of the Hand.*

Dr. Howard Fleming presented a paper on *Head Injuries* at the January meeting. The material was quite complete and very instructive. Those present were rewarded by a very clear and concise presentation of a subject of interest to all in general practice.

The February meeting was given over to the subject of *Medical Economics.* In particular, the discussion had to do with various types of medical service and hospital insurance schemes. Dr. C. Dukes or Oakland described and discussed the methods now in the process of development in Alameda County. Dr. W. Dickie presented the medical service plan outlined by his committee for the state society. The applicability of these plans to a county unit the size of Santa Cruz County was discussed by those present.

The following members were elected to membership at the February meeting: Doctors George Tolman of Watsonville, W. L. Ellis of Boulder Creek, and N. MacLafferty of Soquel.

SAMUEL B. RANDALL, *Secretary.*

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SHASTA COUNTY

The January meeting of the Shasta County Medical Society was held on January 21 at Dozier's Sanitarium in Redding.

The meeting was called to order at 8 p. m. by the president, Dr. Earnest Dozier. Members present were: Doctors Sewall, Saylor, Dozier, Gerrard, and Olberg. Visitors were: Dr. W. M. Wilson of Weaverville and Dr. O. J. Hansen of Redding.

The society voted their disapproval of a recent plan of health insurance and medical service. The

society went on record against the further building of veterans' hospitals and a too extensive practice of antitoxin immunization and smallpox vaccination by the state and county boards of health on patients who can afford such service from private physicians.

The meeting night was changed from the third Saturday of the month to the third Monday of the month. Dr. W. M. Wilson of Weaverville and Dr. O. J. Hansen of Redding were elected members of the society.

F. H. OLBERG, *Secretary.*

SONOMA COUNTY

The Sonoma County Medical Society held its regular monthly meeting for February as a dinner at The Tavern, north of Santa Rosa. President Mark L. Lewis presided. Fifteen members and guests were present.

The entire meeting was devoted to a discussion of legislative and other problems of vital interest to the medical profession.

W. C. SHIPLEY, *Secretary.*

STANISLAUS COUNTY

The monthly meeting of the Stanislaus County Medical Society was held at Grollman's, 820 Twelfth Street, February 10.

The meeting was called to order by Vice-president Marion Collins. Eighteen members were present.

Doctor DeLappe moved that $60 be donated for a half-page article in April, program edition of *News Herald,* giving the history of the Stanislaus County Medical Society and hospitals of Modesto. Motion was seconded by Doctor Maxwell, and carried.

The Public Relations Committee and Doctor McPheeters were appointed to prepare the article.

A motion was made by Doctor McPheeters, and second by Doctor Hiatt, that the secretary write Governor Rolph protesting against the threatened abolishment of the State Narcotic Division for enforcement of these laws. Motion carried.

Dr. James Watkins of San Francisco read a very interesting paper on *Fracture of the Spine.*

J. A. PORTER, *Secretary.*

TULARE COUNTY

The Tulare County Medical Society met at Motley's Café in Visalia on January 29. Dinner was served preceding the meeting. The newly elected president, Doctor Kohn, opened the meeting.

Doctor DeLappe, district councilor, presented a brief survey of the work of the Council for 1932. He made a valuable suggestion in regard to the practice of electing delegates to the state meetings to serve for a number of years instead of for one session that the delegate may become fully acquainted with this work.

The following committees, previously appointed, were announced:

Public Relations Committee—I. M. Lipson of Visalia (chairman), Austin Miller of Porterville, I. H. Betts of Visalia, E. R. Zumwalt of Tulare, R. C. Hill of Exeter, Frank Kohn of Tulare (ex officio).

Venereal Disease Clinic Committee—A. W. Preston of Visalia (chairman), P. S. Barber of Porterville, E. Brigham of Dinuba.

Committee on History and Obituaries—S. S. Ginsburg of Visalia (chairman), H. G. Campbell of Lindsay.

Membership Committee—Donald C. Fowler of Exeter (chairman), L. R. Leidig of Porterville, F. R. Guido of Visalia.

The following committee reports were submitted: Doctor Fowler presented Dr. W. B. Parkinson of Tulare, who was unanimously elected to membership. Doctor Seligman, member of Tulare County Medical Society since 1920, was recently granted transfer to Santa Clara County. Doctor Preston reported the change of the county supervisorial board placed the present problem of venereal disease clinics in abeyance. Doctor Betts reported briefly on a proposed educational program with a letter from Doctor Naffziger, who signified his willingness to conduct a series of neurological meetings. Doctor Lipson, chairman of the Public Relations Committee, presented the following summary of their activities:

The plan of medical insurance, discussed at some length, was temporarily tabled. It was felt that the Fresno County Medical Society could be contacted for further information through their active research committee.

The Tulare County Hospital work was discussed fully and the following conclusions reached: That it be the consensus of opinion of this committee (1) that a Social Service worker be maintained at the County Hospital. (2) That the name of the Tulare County General Hospital be changed to the Tulare County Charity Hospital. (3) That only charity (nonpay) cases be admitted to the hospital. (4) That the establishment of a "pay" wing for general use of all citizens be not recommended. (5) That the staffing of the county hospital by members of the Tulare County Medical Society be not recommended.

The treasurer's report for 1932 was submitted and accepted.

At this point a communication from Dr. H. G. Campbell was read relative to the matter of accepting pay patients at the county hospital, and after discussion it was moved to refer the matter to the Public Relations Committee for further report.

An invitation from the Tulare County Bar Association inviting the medical society to attend a joint meeting on February 5 was read.

A letter on immunization procedures from the State Board of Health was read.

At the conclusion of the business meeting the guest speaker of the evening was introduced, Dr. William M. Newman of San Francisco, who presented two papers—one on *Angina Pectoris,* and a second on *The Diagnosis and Treatment of Acute Coronary Artery Occlusion;* and, in addition, a reel on *Arrhythmias Produced in the Mammalian Heart.* The papers were exceptionally well presented and thoroughly enjoyed by the members. An exceptional attendance was present to hear Doctor Newman.

Following Doctor Newman's paper, Dr. Neil Dau of Fresno opened the discussion. At adjournment a vote of thanks was tendered Doctors Newman and Dau for their contributions to the evening.

Members in attendance were: Doctors Austin Miller, Annie Bond, E. C. Bond, Campbell, Newton Miller, Kohn, Weiss, Betts, Tourtillott, Barber, Parkinson, Zeller, Zumwalt, Ginsburg, Furness, Johnstone, Fowler, Preston, Guido, Brigham, Hill, Lipson, and Seiberth. Besides the speakers we had as guests, Doctors Watke of Tulare, Fry of Exeter, Brigham of Hanford, Fillmore of Strathmore, and Miller of Dinuba.

* * *

An address on the life of George Washington was given by Judge Emmett Seawell, Associate Justice of the Supreme Court, at the annual joint meeting of the Tulare County Bar Association and the Tulare County Medical Society held at Motley's Café on February 5.

Mr. C. L. Bradley, president of the Bar Association, opened the meeting with a brief address, welcoming the physicians who were the guests of the attorneys at the gathering.

KARL F. WEISS, *Secretary.*

VENTURA COUNTY

The February meeting of the Ventura County Medical Society was held at the Ventura Country Club at Saticoy on February 14. A dinner was served to twenty members and nine guests. Members present were: Doctors Jones, Broughton, Mosher, D. G. Clark, Welch, W. S. Clark, Homer, Hendricks, Charles Smolt, Foskett, Bianchi, Shore, Armistead, Strong, Achenbach, Coffey, Illick, Drace, Bardill, and Felberbaum. Visitors present were: Doctors Shelton, Wills, Ullmann, Clark, Cavanaugh, and Mason.

Following the dinner, the meeting was called to order by Doctor Hendricks. On account of the late hour, the minutes of the last meeting, communications, and old and new business were dispensed with.

Dr. W. S. Clark introduced Doctor Shelton of Santa Barbara, who gave an interesting talk on *Endocrinology.* Doctor Wills of Santa Barbara was introduced by Doctor Hendricks as the second speaker of the evening, Doctor Wills gave an interesting talk on *Endothermic Resection of the Prostate and the Development of the Instruments Used in the Operation.*

WILLIAM FELBERBAUM, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (49)

Alameda County.—Sadie Edith Berkove, Emil Leland Blumenthal, Clark J. Burnham, Jr., Harold Clinton Carpenter, Daniel Scott Fox, Belle E. Merrill, Robert Herbert Miles, Edwin Alexander Patterson, Arthur Frank Steinmetz, Bruce Miller Stephens, Kenneth L. Tattersall, Douglas David Toffelmier, Francis Rene Van de Carr.

Los Angeles County.—Harold Eugene Beasley, Ernest Otto Boetticher, Maurice B. Bonta, John Albert E. Bullis, Samuel David Burgeson, Jr., Mark Connell Cameron, Jr., Frederic Ewens, Huna Jacob Fainstein, Dorothy M. Franklin, Edward A. Gummig.

Mendocino County.—Eugene H. Benson, Jr., Thomas P. Hill, Herschel O. Cleland, Edward M. Hummel, Joseph John Kirwin, Olga Alice Miller, Robert Byron Smalley, George S. Wrinkle.

Merced County.—George B. Pimentel, John Stanford Webster.

Monterey County.—James Henry McPharlin, John Randolph Gray, Harry Richard Lusignan, Kensuke Murakami.

Placer County.—Adrian C. Crossen, Edward B. Radford, Ray Cook Atkinson, Michael Flatley.

San Bernardino County.—James Carl Carmack.

San Francisco County.—Gaynelle Robertson, David Abram Susnow.

Santa Barbara County.—Clifford Edmund Case.

Santa Clara County.—Max C. Hawley.

Solano County.—Ambrose Joseph Ryan.

Sonoma County.—Leon Lewis.

Stanislaus County.—Marion Carter Collins.

Transferred (6)

Julian Cohn, from San Francisco to Los Angeles County.

Frederick J. Crease, from Los Angeles to Kern County.

S. N. Jorgensen, from Humboldt to San Francisco County.

La Rue Moore, from Fresno to San Francisco County.

Ina M. Richter, from San Francisco to Santa Barbara County.

Louis L. Seligman, from Tulare to Santa Clara.

In Memoriam

Armstrong, Maurice Moray. Died in Los Angeles, February 8, 1933, age 60 years. Graduate of University of Southern California School of Medicine, Los Angeles, 1902. Licensed in California, 1902. Doctor Armstrong was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Brooks, Thomas Cottrell. Died January 10, 1933, age 58 years. Graduate of Illinois Medical College, Chicago, 1903. Licensed in California, 1922. Doctor Brooks was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Craig, William H. Died in Upland, January 9, 1933, age 74 years. Graduate of College of Physicians and Surgeons of Baltimore, Maryland, 1886. Licensed in California, 1895. Doctor Craig was a retired member of the San Bernardino County Medical Society, the California Medical Association, and the American Medical Association.

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Knorp, Francis Frederick. Died in San Francisco, January 20, 1933, age 60 years. Graduate of Cooper Medical College, San Francisco, 1892. Licensed in California, 1893. Doctor Knorp was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Miller, Charles Howard. Died in San Francisco, February 2, 1933, age 62 years. Graduate of Cooper Medical College, San Francisco, 1896. Licensed in California, 1898. Doctor Miller was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Miller, Edwin M. Died February 16, 1933, age 63 years. Graduate of Ensworth Medical College, St. Joseph, 1897. Licensed in California, 1921. Doctor Miller was a member of the Santa Clara County Medical Society, the California Medical Association, and was a Fellow of the American Medical Association.

✝

Mueller, Carl Amandus. Died in Redding, January 30, 1933, age 67 years. Graduate of Missouri Medical College, St. Louis, 1889. Licensed in California, 1898. Doctor Mueller was a member of the Shasta County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✝

Parks, Joseph Andrew. Died in La Mesa, February 8, 1933, age 61 years. Graduate of Vanderbilt University School of Medicine, Nashville, Tennessee, 1898. Licensed in California, 1904. Doctor Parks was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES

Edwin M. Miller
1869-1933

Dr. Edwin M. Miller, 63 years of age, died February 16 after a sudden heart attack the previous evening.

Stricken while alone in his office, Doctor Miller summoned aid by telephone. His death was unexpected, although he had been in failing health for the past year.

Death ended an intensely active career for Doctor Miller, who in addition to his extensive general practice and his work in Kiwanis, has for the past twenty-five years served in school board work. For thirteen years Doctor Miller served continuously as secretary of the Los Gatos Union High School Board.

Born in Troy, Ohio, Doctor Miller was a graduate of Baker University at Baldwin, Kansas, and studied for his degree at Ensworth Medical College at St. Louis, Missouri. His first practice was in Mound City, Missouri, where, in addition to general practice, he served as a railroad physician. During the World War he was a member of an examining board.

Doctor Miller came to Los Gatos thirteen years ago with his wife and three children. Since then he has been continuously engaged in general practice at Los Gatos. For several terms Doctor Miller has served his county society either as a delegate or alternate to the California State Medical Association. He was truly a doctor of the old school, and his passing is keenly felt both by the profession of this community and the public.

E. SCHMITT.

H. Wilson Levengood
1882-1933

Dr. H. Wilson Levengood was born in Pottstown, Pennsylvania, in 1882. Following a premedical course at Temple University, Philadelphia, he studied at the Medico-Chirurgical College, which is now the postgraduate department of the University of Pennsylvania.

Doctor Levengood was for a year resident physician at Pottenger's Sanitarium for Tuberculosis at Monrovia. Several years' practice in Jerome, Arizona, followed. In 1909 he returned to Los Angeles County and for twenty years was identified with medical welfare and cultural activities of the Ocean Park district.

He was the first chief of staff of the Santa Monica Welfare Clinic, an institution for which he always worked earnestly. The Santa Monica Bay Music Association was organized in his home and he assisted in writing the constitution of that organization. A talented violinist, he had always forwarded musical activities of Santa Monica and served as treasurer of the music association for several years.

Always interested in the beautification of Santa Monica, Doctor Levengood was at one time park commissioner and served on the first board of the city planning commission.

He was a member of the local groups of Masons and Elks, and of the Uplifters and Los Angeles University clubs. He was several times president of the Santa Monica Medical Association and for the last three years had been chief of staff of the Santa Monica Hospital.

Doctor Levengood studied at the New York Postgraduate Hospital, the Manhattan Eye and Ear Hospital, the New York Eye and Ear Infirmary, the Universities of Edinburgh and Vienna, and Moorfields' Eye Hospital in London.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Message from the President of the California Medical Association Auxiliary

Last spring when I became president of the State Auxiliary, I asked that each county make a special effort to perfect its organization, believing that a higher education and development of quality within the groups already formed was of greater importance than rapid expansion. With this in mind, I thought you might enjoy hearing something of the history and growth of the auxiliary movement.

The first auxiliary was organized in Dallas County, Texas, in 1917. The following year the State of Texas boasted of the first state auxiliary. In 1922, when the American Medical Association was meeting in St. Louis, the plan was presented to the House of Delegates and endorsed by them. It is interesting to know that in one year nine states were organized and that up to July, 1932, auxiliaries had been formed in thirty-six states and, in addition, one county in each of two states has an organization which is the nucleus for a state auxiliary.

In the discussion that took place in the American Medical Association Council meeting, following the presentation of the needs and objective of an auxiliary, leaders were frank to acknowledge its social value within the profession, a destructive force within as well as without the profession having been recognized. Unity and solidarity being the acknowledged panacea, a developed social interest and fellowship between the members of doctors' families seemed the most likely medium for action.

It is possible for all auxiliaries to do much in the development of this fellowship which is the harbinger of unity of purpose. They may exert their influence, singly and collectively, toward increased attendance at all medical meetings, whether they be county, state, or national. There are great possibilities in their opportunity to assist in the social life of these meetings. However, social activities are not sufficient in any organization to hold the interest of busy, thinking women, and as a result of a search for larger fields of service, we find that the activities of our organization have divided themselves into the following classes: social, philanthropic, legislative, educational, and public relations. Each county auxiliary is encouraged to develop along each of these lines, but local needs and the desires of the individual auxiliary must determine the objective.

The philanthropic work done is generally closely related to the medical profession: Pennsylvania contributes to a medical benevolent fund for the care of dependent medical men or their families; Missouri contributes to a health educational fund; several states have loan funds for medical students; some contribute to preventoriums; Louisiana sponsors a school for potentially tuberculous children; the Norfolk, Virginia, auxiliary raised $1,600 to endow a hospital bed, collected 1,200 books, 2,000 magazines, and are establishing permanent libraries in hospitals and welfare associations. Open-air camps, Red Cross activities, milk for undernourished children, assistance to hospitals—all lend themselves to an organization anxious to be of real service.

The legislative activities of an auxiliary are manifest only upon the recommendation or approval of the local advisory board. We might liken ourselves to a "reserve force," but, like all standing armies, our strength is measured largely by our equipment. Unless we are informed upon legislative matters relative to public health—this includes local, county, state, and national—we can never hope to step into the front lines effectively when called upon by the medical profession. This need of education on health laws opens an unlimited field for the local program chairman.

The educational program of the auxiliary at large is perhaps the most difficult of the five major activities due, no doubt, to our lack of preparation: our ignorance on matters that are of permanent importance. If we are to develop a loyalty to the profession among the laity, and become a liaison between the doctors and the public, "educating ourselves first," might well become the theme song of any auxiliary.

The Department of Public Relations is perhaps the least understood of the various activities, yet once understood it is the rosetta stone which opens before us new worlds to conquer. When proper leaders are chosen and correct methods of procedure are devised, it is in this realm that our greatest opportunities lie. These opportunities challenge us to bring about a new understanding between the medical profession and the layman. When the members of an auxiliary become well educated, they will reach into every phase of woman's organized work. Y. W. C. A. boards, Parent-Teacher associations, federated clubs, League of Women Voters—these are but a few of the opportunities presented where health programs may be arranged and where our own subtle influence may be felt.

This is a mere skeleton of possibilities. I leave to you the task of filling in the muscle and rounding out the fascia.

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* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Clifford A. Wright, chairman of the Publicity and Publications Committee, 454 South Irving Boulevard, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Wright and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editors to allocate one page in every issue for Woman's Auxiliary notes.

Component County Auxiliaries

San Diego.—Here is the money for you to go to the state convention! Write an essay on the *Doctor's Dilemma,* using a maximum of 500 words or a minimum of 250 words. Twenty dollars for the first prize, ten dollars for the second, and five dollars for the third prize is offered by the State Board of the Auxiliary to the California Medical Association. Doctors as well as their families may contribute. Send your papers to Mrs. Charles Howard, 4223 Arguello Street, San Diego, before March 31. The winning essay will be read at the state convention.

MRS. PAUL E. WEDGEWOOD,
Chairman of the Committee on Essay Contest.

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Santa Barbara.—The Woman's Auxiliary to the Santa Barbara County Medical Society met at the home of Mrs. F. J. Hornboch, 2131 State Street, on February 13. The meeting opened with a short business session, the president, Mrs. R. T. Atsatt, presiding. Fourteen were present.

After discussion, a decision was made to award prizes to the most outstanding graduate from the St. Francis Training School and the Knapp School of Nursing. It was moved by Mrs. Friedell and seconded by Mrs. van Pang that the sum be limited to $10 for each nurse.

Mrs. Markthaler's resignation as treasurer was accepted with regret. Mrs. A. B. Wilcox was elected to fill the position.

The auxiliary was invited to a tea, given in honor of the fifth anniversary of the out-patient department of St. Francis Hospital.

After adjournment, the remainder of the evening was spent sewing on Red Cross garments, following which refreshments, planned by Mrs. W. J. Mellinger, were served.

MRS. W. R. HUNT, *Secretary.*

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Contra Costa.—The Woman's Auxiliary to the Contra Costa County Medical Society met at the home of Mrs. U. S. Abbott in Richmond, Mrs. Abbott presiding. Mrs. L. J. Hedges, as chairman of Hygeia Committee, turned over the sum of $15.60, the proceeds from a bridge and tea party given at her home. It was moved by Mrs. Blake, seconded by Mrs. Daily, that this money be used for the placing of *Hygeia* in the schools throughout Contra Costa County. Motion carried. Mrs. S. N. Weil was appointed publicity chairman.

The newly elected officers are: President, Mrs. U. S. Abbott; first vice-president, Mrs. M. L. Fernandez; second vice-president, Mrs. Koho Dailey; secretary-treasurer, Mrs. W. S. Lucas.

MRS. W. S. LUCAS, *Secretary.*

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Orange.—The first regular meeting of the Woman's Auxiliary to the Orange County Medical Association for the new year was held Tuesday afternoon, February 7, in the home of Mrs. Frank L. Chaplaine, in Orange. Mrs. C. S. O'Toole of Anaheim, president, opened the meeting with a New Year's greeting to the members and guests.

Business for the afternoon centered around the discussion of the creation of an auxiliary loan fund for worthy medical students. It was decided that a sum be taken from the treasury and that personal donations be made to start the fund. This is a very worthy cause it is hoped that other auxiliaries in the state will become interested. Mrs. Herbert Johnston, Anaheim, offered the use of her home for a May musical tea for the benefit of this fund.

A luncheon at the Country Club to Mrs. F. E. Coulter, in appreciation of her constant interest and work in the auxiliary activities, will be held in April.

The speaker of the afternoon, Doctor Roblee of Riverside, addressed the meeting on *What a Doctor's Wife Should Know About Her Husband's Business.* His talk was most enlightening and interesting. The necessity for the doctor's wife to keep alert in the rapid advancements in medicine, to maintain professional secrecy, and to be a partner in arranging the budget were points stressed. He believes the knowledge of the accomplishments made by scientific medicine of vital importance in the education of the public against cults. Doctor Roblee also spoke of the economic problems connected with the private physician's work, brought about by the present government medicine practices.

The meeting was closed with a delightful tea hour served by the hostesses, Mesdames Chaplaine, K. H. Sutherland, E. L. Russell, E. J. Steen, and W. S. Wallace. The table was beautifully decorated in red and white. A patriotic element was brought out by individual white cakes mounted with tiny American flags. The next meeting will be held at the home of Mrs. Dexter Ball, in Santa Ana.

MRS. NEWELL L. MOORE, *Secretary.*

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Riverside.—The Woman's Auxiliary to the Riverside County Medical Society was entertained Monday evening at the home of Mrs. W. W. Roblee, with Mrs. W. B. Payton, Mrs. Jesse Roe, and Mrs. L. J. Clark as assisting hostesses.

Mrs. T. A. Card, hostess chairman, and Mrs. Roblee, program chairman, reported their committee arrangements completed for the ensuing year. The Program Committee plans during this first year to devote the time to becoming better acquainted with local and county welfare organizations.

Dr. C. Van Zwalenburg, a member of the Riverside County Medical Society, gave an address on *Hospitalization as Pertaining to Hospital Management, Medical Care Costs, Staff Organization and What It Means to Patients.*

Mrs. E. S. Moulton, president of the Community Hospital Auxiliary, reviewed the founding of the organization and told of the various ways in which the auxiliary gives service to the hospital. She urged all the doctors' wives to become better acquainted with the work of the auxiliary.

Mrs. A. W. Walker, president, presided and at the close of the meeting called attention to the fact that the February meeting would be held jointly with the Riverside County Medical Society. Dr. Joseph King, president of the California Medical Association, was the guest speaker.

* * *

Sacramento.—Mr. O. H. Close, superintendent of the Preston School of Industry, addressed the members of the Woman's Auxiliary to the Sacramento Society for Medical Improvement at their meeting on January 17. Mr. Close spoke on *Crime Prevention and How the Cost of Crime May Be Reduced.* Members of the San Joaquin County Auxiliary were special guests for the evening.

Mrs. Frank Knell, Mrs. E. O. Brown, and Mrs. Paul Christman were selected as the Nominating Committee for the new officers to be elected in March. Mrs. F. N. Scatena, president, extended an invitation to members of the auxiliary to be guests of the Tuesday Club at their meeting on January 24. Dr. J. B. Harris was the guest speaker, and club members who are members of the auxiliary acted as hostesses.

Hostesses for a social hour following the meeting were: Mesdames Leo Fanell, M. Fanell, H. J. Davis, Dave Dozier, A. K. Dunlap, J. B. Harris, Russell Harris, M. N. Haworth, Howard Hall, Hugo Childress of Ione, and Paul Faws of Elk Grove.

News

Meeting of the State Auxiliary Board.—The State Board of the Woman's Auxiliary to the California Medical Association met on February 17 at the Biltmore Hotel in Los Angeles, the executive board meeting at 9:30, and the regular board at 10:30. Mrs. Coulter presided. Report will be printed in next issue.

NEVADA STATE MEDICAL ASSOCIATION

O. HOVENDEN, McGill ..... President
D. A. SMITH, Mina ..... President-Elect
J. N. VAN METER, Las Vegas ..... First Vice-President
FLEET H. HARRISON, Minden ..... Second Vice-President
HORACE J. BROWN ..... Secretary

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The Washoe County Medical Society met in the State Building on Tuesday evening, February 14, President A. R. DaCosta presiding.

The society gave twenty minutes of its time to listen to a talk by a gentleman from Sacramento who was interested in forming an association in Reno to secure hospitalization on a sort of insurance plan. The society listened attentively, but the response from the members was not of sufficient importance to justify the members assuming any responsibility in coöperating with this plan, so the matter was dropped.

Next followed an exhibition by the local Fire Department, with Assistant Fire Chief George Twaddle in charge, on the method of resuscitating persons overcome by gas and smoke fumes from burning buildings. The apparatus is known as an inhalator. Instead of driving air and oxygen into the lungs, artificial respiration by the Schaffer method was done, and the mouth piece covering the mouth held carbon dioxid and oxygen in percentage solution. This method of resuscitation is applicable to pneumonia patients. The gaseous ingredients clear up the airways of the lungs, allowing more oxygen into the blood. This could be kept up for twenty-four hours or more, possibly aiding the patient to pass the crisis when resolution would clear the lungs. The exhibition was well received.

* * *

Then came the reading of resolutions by a committee, consisting of George L. Servoss, Donald Maclean, and C. W. West, as follows:

IN MEMORIAM—ARTHUR L. GROVER

WHEREAS, The All Wise Providence has seen fit to remove from our midst our brother physician, Arthur L. Grover; and

WHEREAS, This has brought great sorrow to his loved ones and to ourselves; now therefore be it

Resolved, That the Washoe County Medical Society tender to those who are grieving its sincerest sympathy in their hour of sadness; and be it further

Resolved, That a copy of these resolutions be placed in the hands of our late brother's family and that a copy also be placed upon the minutes of the Washoe County Medical Society.

* * *

IN MEMORIAM—JOHN TEES

WHEREAS, The Omnipotent Power has taken from us and his loved ones our fellow member, Dr. John Tees; and

WHEREAS, This has caused much sorrow and anguish upon the part of his family, as well as sorrow to ourselves; now therefore be it

Resolved, That we tender our sincerest sympathies to his family in this their hour of grief; and be it further

Resolved, That copies of these resolutions be placed in the hands of his family and that they be spread upon the minutes of the Washoe County Medical Society.

* * *

Dr. Grover died in Reno on January 28. He was a graduate of Harvard Medical University. During his life in Reno he was the pathologist at Saint Mary's Hospital. Prior to graduation Doctor Grover served in the Spanish-American War, in the Seventh Army Corps, serving in Cuba contemporary with the secretary. He was a member of the First Battalion, First Maine Heavy Artillery. The local Post of the Spanish-American War Veterans officiated at the final rites.

* * *

Dr. John Tees was a graduate of McGill University, Montreal. During his residence in Reno for the past seventeen years, he specialized in pediatrics. His death occurred on February 3.

* * *

The evening's program was next in order. The Program Committee had decided to have a young man's night, with a program on pneumonia. The first paper was the treatment of pneumonia by Dr. H. A. Kimmel, recent graduate of the University of Pennsylvania, and Dr. Frank Samuels, recent graduate of the Medical College of Cornell University. The next paper was also on the treatment of pneumonia by Dr. Francis Morley of Gardnerville, recent graduate of the University of Colorado Medical Department. Then followed a paper on bronchopneumonia by Dr. A. W. Macpherson of Sparks, graduate of the College of Medical Evangelists, Los Angeles. The discussion was led by Dr. Dwight Hood of Reno, graduate of St. Louis Medical School.

The able ability displayed by each of the essayists showed that their training had been thorough and all along the same lines of the newest developments of medicine and mechanical therapeutics. Some of the essayists did not wholly agree that up to now the treatment by serum had become so standardized as to be universally pronounced a success. Yet the consensus of discussion was that leading eastern hospitals, with proper selection of serum given early, had been able to reduce the death rates in types one and types two by practically 50 per cent. The serum treatment was possibly the best treatment available for the profession today. One great objection to the serum treatment was its cost, an average case costing upward from $75 to $100 for serum alone. The use of diathermy was highly commended by some, while others spoke of optochin, a quinin derivative, as useful in the disease. The usual medications such as intravenous injection of quinin, hypertonic solutions of normal salt, injection of glucose, instillation of oxygen by the bowel, and oral medication by various drugs. All these were gone into by detail. The fact still remains that the mortality from this disease was higher when epidemics prevail and that with all the usual medications, the mortality in Nevada from pneumonia would run close to 50 per cent of all cases. The ideal treatment for pneumonia has yet to be discovered. Possibly it lies in a more perfect serum than is now attainable. The bacteremia incident in one-third of all patients, with a death rate of 80 per cent, can possibly be mitigated in the future by some intravenous antiseptic that might destroy the pneumococci and its capsule as well. Until better means are devised and a certain standardization of treatment is secured, it is evident that pneumonia will be treated by the practitioner along the lines which best appeal to him.

The thanks of the society was tendered the essayists for the able manner in which they presented their papers.

It was announced that the next meeting would be a symposium on obstetrics, with several illustrative movies.

There were twenty-two members and three visitors present.

THOMAS W. BATH, *Secretary.*

Nevada News

The following officers have been elected for 1933 for the various county societies of the Nevada State Medical Association:

Clark County — President, R. W. Martin of Las Vegas; secretary-treasurer, J. N. Van Meter of Las Vegas.

Washoe County—President, A. R. DaCosta of Reno; secretary-treasurer, Thomas W. Bath of Reno.

White Pine County—President, J. M. Thorup of Ely; secretary-treasurer, N. Smernoff of McGill.

HORACE J. BROWN, *Secretary.*

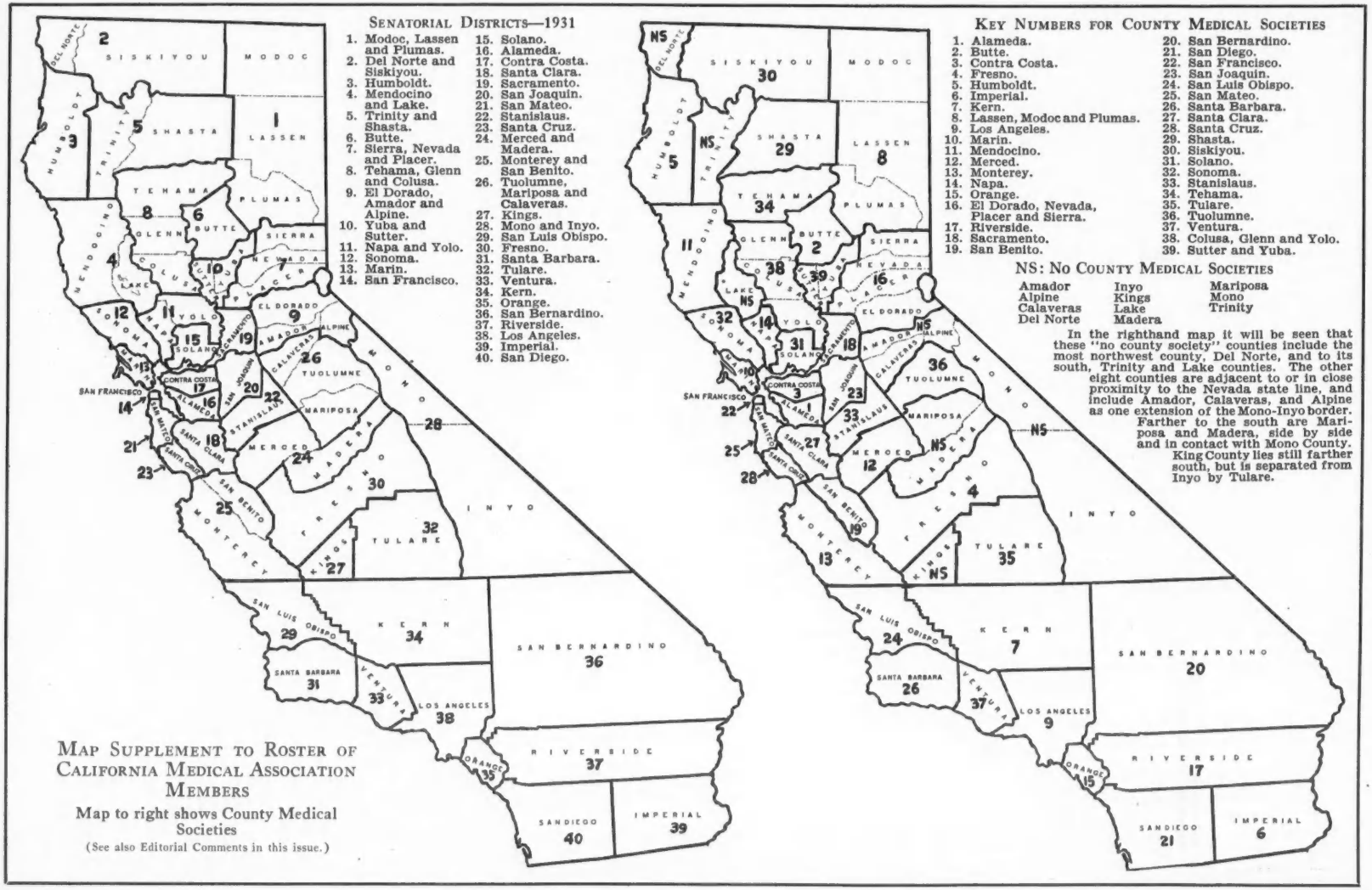
TABLE SUPPLEMENT TO ROSTER: CALIFORNIA COUNTIES—*Statistics: General and Medical*

Official California Class	County	Key Number to Indicate County Medical Society†	Land Area Square Miles	1930 Population		Population, 1920	Per Cent of Increase 1920 to 1930	Est. No. M. D.'s in County	Est. No. Members in County Society‡
				Total	Per Square Mile				
1	Los Angeles	9	4,115	2,208,492	536.7	936,455	135.8	3,833	1,821
2	San Francisco	22	42	634,394	15,104.6	506,676	25.2	1,584	871
3	Alameda	1	732	474,883	648.7	344,177	38.0	739	435
4	San Diego	21	4,221	209,659	49.7	112,248	86.8	396	217
5	Santa Clara	27	1,328	145,118	109.3	100,676	44.1	241	146
6	Fresno	4	5,950	144,379	24.3	128,779	12.1	135	102
7	Sacramento	18	983	141,999	144.5	91,029	56.0	163	132
8	San Bernardino	20	20,175	133,900	6.6	73,401	82.4	159	109
9	Orange	15	795	118,674	149.3	61,375	93.4	142	96
10	San Joaquin	23	1,448	102,940	71.1	79,905	28.8	110	76
11	Kern	7	8,003	82,570	10.3	54,843	50.6	63	53
12	Riverside	17	7,223	81,024	11.2	50,297	61.1	90	53
13	Contra Costa	3	714	78,608	110.1	53,889	45.9	65	38
14	Tulare	35	4,856	77,442	15.9	59,031	31.2	68	37
15	San Mateo	25	447	77,405	173.2	36,781	110.4	57	38
16	Santa Barbara	26	2,740	65,167	23.8	41,097	58.6	110	86
17	Sonoma	32	1,582	62,222	39.3	52,090	19.5	65	51
18	Imperial	6	4,089	60,903	14.9	43,453	40.2	35	22
19	Stanislaus	33	1,450	56,641	39.1	43,557	30.0	51	37
20	Ventura	37	1,858	54,976	29.6	28,724	91.4	56	30
21	Monterey	13	3,330	53,705	16.1	27,980	91.9	52	36
22	Humboldt	5	3,575	43,233	12.1	37,413	15.6	44	32
23	Marin	10	529	41,648	78.7	27,342	52.3	34	22
24	Solano	31	822	40,834	49.7	40,602	0.6	44	18
25	Santa Cruz	28	435	37,433	86.1	26,269	42.5	49	29
26	Merced	12	1,995	36,748	18.4	24,579	49.5	23	20
27	Butte	2	1,698	34,093	20.1	30,030	13.5	29	19
28	San Luis Obispo	24	3,334	29,613	8.9	21,893	35.3	33	19
29	Siskiyou	30	6,256	25,480	4.1	18,545	37.4	23	15
30	Kings	N. S.	1,159	25,385	21.9	22,031	15.2	15	N. S.
31	Placer	16	1,411	24,468	17.3	18,584	31.7	34	*
32	Yolo	38	1,014	23,644	23.3	17,105	38.2	24	*
33	Mendocino	11	3,539	23,505	6.6	24,116	—2.5	21	13
34	Napa	14	783	22,897	29.2	20,678	10.7	40	26
35	Madera	N. S.	2,112	17,164	8.1	12,203	40.7	18	N. S.
36	Sutter	39	608	14,618	24.0	10,115	44.5	9	*
37	Shasta	29	3,858	13,927	3.6	13,361	4.2	11	10
38	Tehama	34	2,925	13,866	4.7	12,882	7.6	15	11
39	Lassen	8	4,531	12,589	2.8	8,507	48.0	9	*
40	Yuba	39	632	11,331	17.9	10,375	9.2	15	*
41	San Benito	19	1,392	11,311	8.1	8,995	25.7	14	7
42	Glenn	38	1,337	10,935	8.2	11,853	—7.7	47	*
43	Nevada	16	974	10,596	10.9	10,850	—2.3	10	*
44	Colusa	38	1,140	10,258	9.0	9,290	10.4	8	*
45	Tuolumne	36	2,190	9,271	4.2	7,768	19.3	11	6
46	Amador	N. S.	601	8,494	14.1	7,793	9.0	7	N. S.
47	El Dorado	16	1,737	8,325	4.8	6,426	29.6	5	*
48	Modoc	8	3,823	8,038	2.1	5,425	48.2	8	*
49	Plumas	8	2,593	7,913	3.1	5,681	39.3	7	*
50	Lake	N. S.	1,238	7,166	5.8	5,402	32.7	12	N. S.
51	Inyo	N. S.	9,991	6,555	0.7	7,031	—6.8	6	N. S.
52	Calaveras	N. S.	1,027	6,008	5.9	6,183	—2.8	9	N. S.
53	Del Norte	N. S.	1,024	4,739	4.6	2,759	71.8	5	N. S.
54	Mariposa	N. S.	1,463	3,233	2.2	2,775	16.5	3	N. S.
55	Trinity	N. S.	3,096	2,809	0.9	2,551	10.1	1	N. S.
56	Sierra	16	923	2,422	2.6	1,783	35.8	3	*
57	Mono	N. S.	3,030	1,360	0.4	960	41.7	2	N. S.
58	Alpine	N. S.	776	241	0.3	243	—0.8	..	N. S.
	Totals		155,652	5,677,251	36.5	3,426,861	65.7		

† If a county has no county medical society, the letters N. S. (No Society) are placed after the name of the county.

* In the conjoint county medical societies the total membership for the entire conjoint societies is as follows: Lassen-Plumas, 11; Yolo-Colusa-Glenn, 27; Yuba-Sutter, 13; Placer-Nevada-El Dorado-Sierra, 28.

‡ For total membership by counties for the year 1932, see list as given at the beginning of the Roster text, which follows.


SENATORIAL DISTRICTS—1931
1. Modoc, Lassen and Plumas.
2. Del Norte and Siskiyou.
3. Humboldt.
4. Mendocino and Lake.
5. Trinity and Shasta.
6. Butte.
7. Sierra, Nevada and Placer.
8. Tehama, Glenn and Colusa.
9. El Dorado, Amador and Alpine.
10. Yuba and Sutter.
11. Napa and Yolo.
12. Sonoma.
13. Marin.
14. San Francisco.
15. Solano.
16. Alameda.
17. Contra Costa.
18. Santa Clara.
19. Sacramento.
20. San Joaquin.
21. San Mateo.
22. Stanislaus.
23. Santa Cruz.
24. Merced and Madera.
25. Monterey and San Benito.
26. Tuolumne, Mariposa and Calaveras.
27. Kings.
28. Mono and Inyo.
29. San Luis Obispo.
30. Fresno.
31. Santa Barbara.
32. Tulare.
33. Ventura.
34. Kern.
35. Orange.
36. San Bernardino.
37. Riverside.
38. Los Angeles.
39. Imperial.
40. San Diego.
KEY NUMBERS FOR COUNTY MEDICAL SOCIETIES
1. Alameda.
2. Butte.
3. Contra Costa.
4. Fresno.
5. Humboldt.
6. Imperial.
7. Kern.
8. Lassen, Modoc and Plumas.
9. Los Angeles.
10. Marin.
11. Mendocino.
12. Merced.
13. Monterey.
14. Napa.
15. Orange.
16. El Dorado, Nevada, Placer and Sierra.
17. Riverside.
18. Sacramento.
19. San Benito.
20. San Bernardino.
21. San Diego.
22. San Francisco.
23. San Joaquin.
24. San Luis Obispo.
25. San Mateo.
26. Santa Barbara.
27. Santa Clara.
28. Santa Cruz.
29. Shasta.
30. Siskiyou.
31. Solano.
32. Sonoma.
33. Stanislaus.
34. Tehama.
35. Tulare.
36. Tuolumne.
37. Ventura.
38. Colusa, Glenn and Yolo.
39. Sutter and Yuba.
NS: NO COUNTY MEDICAL SOCIETIES
Amador
Alpine
Calaveras
Del Norte
Inyo
Kings
Lake
Madera
Mariposa
Mono
Trinity
In the righthand map it will be seen that these "no county society" counties include the most northwest county, Del Norte, and to its south, Trinity and Lake counties. The other eight counties are adjacent to or in close proximity to the Nevada state line, and include Amador, Calaveras, and Alpine as one extension of the Mono-Inyo border. Farther to the south are Mariposa and Madera, side by side and in contact with Mono County. King County lies still farther south, but is separated from Inyo by Tulare.
MAP SUPPLEMENT TO ROSTER OF CALIFORNIA MEDICAL ASSOCIATION MEMBERS
Map to right shows County Medical Societies
(See also Editorial Comments in this issue.)

C. M. A. MEMBERSHIP ROSTER — MARCH, 1933

KEY NUMBERS FOR COUNTY MEDICAL SOCIETIES

1. Alameda County.
2. Butte County.
3. Contra Costa County.
4. Fresno County.
5. Humboldt County.
6. Imperial County.
7. Kern County.
8. Lassen-Plumas County.
9. Los Angeles County.
10. Marin County.
11. Mendocino County.
12. Merced County.
13. Monterey County.
14. Napa County.
15. Orange County.
16. Placer (El Dorado, Nevada, Sierra) County.
17. Riverside County.
18. Sacramento County.
19. San Benito County.
20. San Bernardino County.
21. San Diego County.
22. San Francisco County.
23. San Joaquin County.
24. San Luis Obispo County.
25. San Mateo County.
26. Santa Barbara County.
27. Santa Clara County.
28. Santa Cruz County.
29. Shasta County.
30. Siskiyou County.
31. Solano County.
32. Sonoma County.
33. Stanislaus County.
34. Tehama County.
35. Tulare County.
36. Tuolumne County.
37. Ventura County.
38. Yolo-Colusa-Glenn County.
39. Yuba-Sutter County.

COUNTY SOCIETY MEMBERSHIP TOTALS

(Year 1932)

Alameda County	446
Butte County	18
Contra Costa County	43
Fresno County	114
Humboldt County	33
Imperial County	23
Kern County	52
Lassen-Plumas County	12
Los Angeles County	1909
Marin County	25
Mendocino County	13
Merced County	19
Monterey County	38
Napa County	25
Orange County	108
Placer County	27
Riverside County	53
Sacramento County	133
San Benito County	5
San Bernardino County	117
San Diego County	225
San Francisco County	824
San Joaquin County	80
San Luis Obispo County	24
San Mateo County	52
Santa Barbara County	95
Santa Clara County	160
Santa Cruz County	33
Shasta County	9
Siskiyou County	18
Solano County	20
Sonoma County	44
Stanislaus County	40
Tehama County	13
Tulare County	40
Tuolumne County	3
Ventura County	29
Yolo-Colusa-Glenn County	32
Yuba-Sutter County	15
Active members	4969
Associate members	6
Retired members	44
Honorary members	16
Total membership	5035

Fifty-five members died during the year 1932.

Editor's Note.—The California Medical Association by-laws provide for an annual directory. Because every member receives the annual directory of the Board of Medical Examiners of the State of California, and in order to avoid the great cost of duplication of such a directory, the California Medical Association Council has decided to print in the official journal a simple roster of members, giving for each member the city or place of residence, with a key number to indicate the county medical society in which membership is held. For additional information concerning school of graduation, etc., the State Medical Board directory or the central office of the California Medical Association should be consulted. Errors in the list here printed should be promptly reported to the central office of the California Medical Association, Four Fifty Sutter, San Francisco.

A

NAME	COUNTY	COUNTY SOCIETY NO.
Aarons, L. H.,	*Oakland*	1
Abbott, C. L.,	*Oakland*	1
Abbott, F. F.,	*Ontario*	20
Abbott, G. K.,	*Glendale*	9
Abbott, L. C.,	*San Francisco*	22
Abbott, U. S.,	*Richmond*	3
Abdun-Nur, A. S.,	*Los Angeles*	9
Abowitz, J.,	*Los Angeles*	9
Abraham, S. V.,	*Los Angeles*	9
Abraham, V. R.,	*Long Beach*	9
Abramson, M. J.,	*Los Angeles*	9
Achenbach, L. W.,	*Ventura*	37
Adams, B. O.,	*Riverside*	17
Adams, B. A.,	*San Leandro*	1
Adams, H. G.,	*Fresno*	4
Adams, J. H.,	*Oakland*	1
Adams, L. P.,	*Oakland*	1
Adams, L. E.,	*Escondido*	21
Adams, W. C.,	*Oakland*	1
Adams, W. L.,	*Fresno*	4
Addis, T.,	*San Francisco*	22
Adelstein, L. J.,	*Los Angeles*	9
Adler, H. M.,	*Berkeley*	1
Adler, H. F.,	*San Francisco*	22
Agmar, A. R.,	*San Francisco*	22
Ahlem, J.,	*Livermore*	1
Ahrens, C. L.,	*Artesia*	9
Ainley, F. C.,	*Los Angeles*	9
Alanson, M. R.,	*San Francisco*	22
Albert, J. A.,	*Newman*	33
Albert, W.,	*Los Angeles*	9
Alberty, W. M.,	*East San Diego*	21
Albi, P.,	*San Francisco*	22
Alcazar, I.,	*Long Beach*	9
Alcon, D. N.,	*Los Angeles*	9
Alden, B. F.,	*San Francisco*	22
Alden, E.,	*Los Angeles*	9
Alderson, V. G.,	*Oakland*	1
Alderson, H. E.,	*San Francisco*	22
Aldrich, W. S.,	*Los Angeles*	9
Alesen, L. A.,	*Los Angeles*	9
Alexander, A. A.,	*Oakland*	1
Alexander, E. W.,	*San Francisco*	22
Alexander, E.,	*Oakdale*	33
Alexander, H. H.,	*San Francisco*	26
Alexander, J. H.,	*Chico*	2
Alexander, R. L.,	*Ontario*	20
Allan, J. T. M.,	*Los Angeles*	9
Allen, A. B.,	*Los Angeles*	9
Allen, A.,	*San Pedro*	9
Allen, C. S.,	*Los Angeles*	9
Allen, C. L.,	*Los Angeles*	9
Allen, D. M.,	*Oakland*	1
Allen, E. G.,	*Patterson*	33
Allen, F. M.,	*San Diego*	21
Allen, H. W.,	*San Francisco*	22
Allen, J.,	*Raymond*	4
Allen, J. R.,	*Los Angeles*	9
Allen, M. R.,	*Fairfax*	10
Allen, O. K.,	*San Francisco*	22
Allen, P. K.,	*San Diego*	21
Allen, W. B.,	*Oakland*	1
Aller, D. L.,	*Fresno*	4
Allison, C. N.,	*San Diego*	21
Alsberge, E. W.,	*Glendale*	9
Alter, S. M.,	*Los Angeles*	9
Althausen, T. L.,	*San Francisco*	22
Alton, W. A.,	*San Diego*	21
Alvarez, L. F.,	*Los Angeles*	9
Alward, H. C.,	*Los Angeles*	9
Amaral, E. A.,	*San Jose*	27
Ambrose, C. S.,	*Los Angeles*	9
Ames, E. W.,	*Los Angeles*	9
Ammann, F. X., Jr.,	*Los Angeles*	9
Amsbaugh, A. E.,	*San Francisco*	22
Anderson, A. C.,	*Petaluma*	32
Anderson, A. V.,	*Pasadena*	9
Anderson, A. E.,	*Fresno*	4
Anderson, C. E.,	*Los Angeles*	9
Anderson, C. W.,	*Los Angeles*	9
Anderson, C. M.,	*Hermosa Beach*	9
Anderson, E. L.,	*Los Angeles*	9
Anderson, F. N.,	*Los Angeles*	9
Anderson, F. R.,	*Campbell*	27
Anderson, H. H.,	*San Francisco*	22
Anderson, H. E.,	*Culver City*	9
Anderson, H., Jr.,	*Los Angeles*	9
Anderson, H. C.,	*Pomona*	9
Anderson, J. F.,	*Los Angeles*	9
Anderson, L. N.,	*Inglewood*	9
Anderson, N. P.,	*Los Angeles*	9
Anderson, O.,	*Santa Monica*	9
Anderson, S. B.,	*Burbank*	9
Anderson, W. N.,	*Los Angeles*	9
Anderton, H. S.,	*San Diego*	21
Andre, E. M.,	*Los Angeles*	9
Andrews, H. J.,	*Hollywood*	9
Andrews, H.,	*Los Angeles*	9
Andrews, H. F.,	*San Diego*	21
Andrews, J. N.,	*Los Angeles*	9
Andrews, V. L.,	*Los Angeles*	9
Andrus, L. M.,	*King City*	13
Ankele, C. W.,	*Sacramento*	18
Annis, A. J.,	*Los Angeles*	9
Anthony, E. H.,	*Los Angeles*	9
Anton, F. L.,	*Los Angeles*	9
Apostolides, E.,	*San Francisco*	22
Apple, W. W.,	*El Centro*	6
Appeldorn, H. H.,	*Oakland*	1
Arbuthnot, R. E.,	*Glendale*	9
Arehart, A. A.,	*Monterey*	13
Arkush, A. S.,	*Santa Monica*	9
Armen, G. H.,	*Los Angeles*	9
Armistead, H. V.,	*Newman*	33
Armitstead, R. B.,	*Ventura*	37
Armstrong, A. C.,	*San Francisco*	22
Armstrong, E. L.,	*Los Angeles*	9
Armstrong, M. I.,	*Berkeley*	1
Armstrong, M. M.,	*Los Angeles*	9
Armstrong, V. C.,	*Los Angeles*	9
Arnold, C. H.,	*San Francisco*	22
Arnold, F. L.,	*Long Beach*	9
Arnold, H. J.,	*Milpitas*	27
Arnold, H. R.,	*San Francisco*	22
Arnold, M. H.,	*San Diego*	21
Arnold, W. F.,	*Long Beach*	9
Arnot, P. H.,	*San Francisco*	22
Arnov, B.,	*Los Angeles*	9
Ash, R. L.,	*San Francisco*	22
Ashcroft, F. E.,	*Chula Vista*	21
Ashley, N. N.,	*Oakland*	1
Ashley, R. E.,	*San Francisco*	22
Askey, E. V.,	*Los Angeles*	9
Askey, J. M.,	*Los Angeles*	9
Atkinson, C. E.,	*Banning*	17
Atkinson, D. W.,	*San Francisco*	22
Atkinson, R. C.,	*Weimar*	16
Atsatt, R. F.,	*Santa Barbara*	26
Attwood, W. G.,	*Los Angeles*	9
Atwood, A. C.,	*Chowchilla*	12
Atwood, H. A.,	*Riverside*	17
Audrain, L. C.,	*Los Angeles*	9
Auerback, L. B.,	*Hollywood*	9
Auslen, H.,	*Oakland*	1
Austin, L. C.,	*Los Angeles*	27
Austin, M. O.,	*San Francisco*	22
Austin, T. C.,	*Bakersfield*	7
Avery, J. W.,	*Hollywood*	9
Avery, W. J.,	*Fresno*	4
Axline, J. T.,	*North Hollywood*	9
Ayer, E. W.,	*Oakland*	1
Ayer, P. E.,	*Los Angeles*	9
Ayers, T. F.,	*San Francisco*	22
Ayres, S., Jr.,	*Los Angeles*	9
Ayres, W.,	*Los Angeles*	9
Azevedo, M. L.,	*Sacramento*	18

B

Babcock, D. W.,	*Placerville*	18
Babcock, D. T.,	*Los Angeles*	9
Babcock, E. S., Jr.,	*Sacramento*	18
Babcock, H. C.,	*San Diego*	21

NAME	COUNTY	COUNTY SOCIETY NO.
Babcock, J. W.,	*Placerville*	18
Babcock, L. G.,	*Vernon*	9
Babcock, R. A.,	*Willits*	11
Babienco, A. T.,	*San Diego*	21
Babington, S. H.,	*Berkeley*	1
Bachelder, B. B.,	*Sebastopol*	32
Bacher, J. A.,	*San Francisco*	22
Bachhuber, C. A.,	*Los Angeles*	9
Bachmann, G. W.,	*Santa Monica*	9
Bacigalupi, L. D.,	*San Francisco*	22
Bacon, D. N.,	*Bakersfield*	7
Bacon, L. H.,	*San Bernardino*	20
Bacon, L. C.,	*Beverly Hills*	9
Baer, H.,	*Elsinore*	17
Baetz, W. G.,	*Huntington Park*	9
Bahrenburg, G. E.,	*Bakersfield*	7
Bailey, C. O.,	*Los Angeles*	9
Bailey, F. J.,	*Red Bluff*	34
Bailey, W.,	*San Francisco*	22
Bailly, T. E.,	*San Francisco*	22
Baiocchi, A. J.,	*San Jose*	27
Baird, C. G.,	*Santa Maria*	26
Baird, H. R.,	*Sacramento*	18
Bak E. W.,	*Los Angeles*	9
Baker, C. D.,	*Los Angeles*	9
Baker, G. L.,	*San Francisco*	22
Baker, H. V.,	*Napa*	14
Baker, John J.,	*West Los Angeles*	9
Baker, M. D.,	*Santa Ana*	15
Baker, M. D.,	*San Jose*	27
Baker, R. W.,	*Los Angeles*	9
Baker, W. P.,	*Santa Ana*	15
Bakewell, B.,	*Santa Barbara*	26
Baldwin, A. K.,	*Long Beach*	9
Baldwin, L. G.,	*Pasadena*	9
Balkins, A. J.,	*Los Angeles*	9
Ball, C. D.,	*Santa Ana*	15
Ball, D. R.,	*Santa Ana*	15
Ball, H. A.,	*San Diego*	21
Ball, J. D.,	*San Francisco*	22
Ball, J. D.,	*Santa Ana*	15
Ballard, C. H.,	*Santa Monica*	9
Ballard, S. E.,	*Long Beach*	9
Balsley, J. A.,	*Los Angeles*	9
Baltimore, L.,	*Los Angeles*	9
Balycat, F. S.,	*Los Angeles*	9
Bames, H. O.,	*Los Angeles*	9
Bancroft, I. R.,	*Los Angeles*	9
Bandelier, R. H.,	*Los Angeles*	9
Banks, A. E.,	*San Diego*	21
Banks, W. H.,	*San Francisco*	22
Bantum, F. M.,	*Los Angeles*	9
Barber, E. M.,	*Oakland*	1
Barber, P. S.,	*Porterville*	35
Barbour, N. P.,	*Stockton*	23
Barclay, H. A.,	*San Diego*	21
Bardill, J. W.,	*Ventura*	37
Barkan, A.,	*Zurich*	22
Barkan, H.,	*San Francisco*	22
Barkan, O.,	*San Francisco*	22
Barlow, W. J.,	*Los Angeles*	9
Barnard, F. S.,	*Los Angeles*	9
Barnard, H. D.,	*Los Angeles*	9
Barnard, L. B.,	*Oakland*	1
Barnes, J. W.,	*Stockton*	23
Barnes, L. B.,	*Newcastle*	16
Barnes, P. D.,	*Loomis*	16
Barnes, R. W.,	*Los Angeles*	9
Barnes, S. D.,	*Los Angeles*	9
Barnes, W. H.,	*Oakland*	1
Barnett, C. W.,	*San Francisco*	22
Barnett, E. D.,	*Santa Rosa*	32
Barnett, G. D.,	*San Francisco*	27
Barney, E. L.,	*San Francisco*	22
Barney, T. R.,	*San Francisco*	22
Barnhart, W.,	*Los Angeles*	9
Baron, P. P.,	*Alameda*	30
Barr, A. L.,	*San Diego*	21
Barr, W. T.,	*Fresno*	4
Barrett, G. M.,	*San Francisco*	22
Barrette, L. C.,	*Sacramento*	18
Barron, H. C., Jr.,	*Escondido*	9
Barron, H. M.,	*Los Angeles*	9
Barron, O. B.,	*Ferndale*	5
Barrow, J. V.,	*Los Angeles*	9
Barrow W. H.,	*San Diego*	21
Barry, G. L.,	*San Jose*	27
Bartle, I. B.,	*San Luis Obispo*	24
Bartholomew, J. Y.,	*San Francisco*	22
Bartholomew, T. E.,	*Calexico*	6
Bartlett, E. I.,	*San Francisco*	22
Barton, E. W.,	*Alhambra*	9
Bascom, F. S.,	*Oakland*	1
Bates, C. E. H.,	*San Francisco*	22
Bates, M.,	*Santa Ana*	15
Bates, W. E.,	*Davis*	38
Bathurst, E. W.,	*Etna*	30
Baughman, W. H.,	*Oakland*	1
Baumgaertner, O. C.,	*Los Angeles*	9
Baumgartner, C. J.,	*Los Angeles*	9
Bautista, M. D.,	*Stockton*	23
Baxter, C. P.,	*San Diego*	21
Baxter, D. E.,	*Glendale*	9
Baxter, F. S.,	*Oakland*	1
Baxter, G. H.,	*Oakland*	1
Bay, S. G.,	*Los Angeles*	9
Bayer, L. M.,	*San Francisco*	22
Bayley, W. A.,	*Los Angeles*	9
Baylis, J. N.,	*San Bernardino*	20
Beach, E. W.,	*Sacramento*	18
Bear, N. K.,	*Riverside*	17
Beard, J. L.,	*Martinez*	3
Beardslee, A.,	*San Francisco*	22
Beasley, E. M.,	*Santa Ana*	15
Beasley, H. E.,	*Los Angeles*	9
Beattie, D. A.,	*San Jose*	27
Beattie, Hugh,	*Elk Grove*	18
Beattie, J. I.,	*San Jose*	27
Beattie, W. A.,	*Sacramento*	18
Beatty, H. J.,	*Hollywood*	9
Beatty, J. D.,	*Los Angeles*	9
Beauchamp, H. H.,	*Sacramento*	18
Beaudoux, H. A.,	*Oakland*	1
Beaver, H. J.,	*Palo Alto*	27
Beaver, M. G.,	*Redlands*	20
Beck, H. H.,	*Corning*	34
Beck, H. R.,	*Los Angeles*	9
Beck, J. A.,	*Salinas*	13
Beck, J. E.,	*Tulare*	35
Becka, S. J.,	*Los Angeles*	9
Becker, G. H.,	*San Francisco*	22
Becker, H. F.,	*Los Angeles*	9
Beckett, W. W.,	*Los Angeles*	9
Beckett, W. A.,	*New York*	9
Bedri, J. L.,	*Salinas*	13
Beebe, J. L.,	*Anaheim*	15
Beebe, L. J.,	*Santa Maria*	26
Beede, A. H.,	*Walnut Creek*	3
Beekler, A. M.,	*Santa Maria*	26
Beem, M.,	*Los Angeles*	9
Beerman, H. M.,	*Los Angeles*	9
Beerman, W. F.,	*San Francisco*	22
Behne, K. F.,	*Los Angeles*	9
Behneman, H. M. F.,	*San Francisco*	22
Beigelman, M.,	*Los Angeles*	9
Belford, W. W.,	*San Diego*	21
Belgum, H. N.,	*Richmond*	3
Bell, H. D.,	*Oakland*	1
Bell, H. G.,	*San Francisco*	22
Bell, H. W.,	*Bakersfield*	7
Bell, L. P.,	*Sacramento*	38
Bell, M. T.,	*Ventura*	37
Bell, T. F.,	*Oakland*	1
Bell, W. L.,	*Oakland*	1
Bellin, J. J.,	*Los Angeles*	9
Belove, B.,	*Los Angeles*	9
Belt, A. E.,	*Los Angeles*	9
Belt, R. L.,	*Montrose*	9
Belyea, J. H.,	*Los Molinos*	34
Bender, W. L.,	*San Francisco*	22
Bendlage, G. A.,	*Long Beach*	9
Benner, E. A.,	*San Mateo*	25
Bennett, C. B.,	*Berkeley*	1
Bennett, C. L.,	*Los Angeles*	9
Bennett, D. W.,	*San Francisco*	22
Bennett, E. L.,	*Fresno*	4
Bennett, E. C.,	*Ukiah*	11
Bennett, E. S.,	*Los Angeles*	9
Bennett, L. B.,	*Los Angeles*	9
Bennett, M. C.,	*Berkeley*	1
Bennett, M. G. E.,	*El Monte*	9
Bennett, W. W.,	*Los Angeles*	9
Bennetts, F. A.,	*Los Angeles*	9
Benninger, C., Jr.,	*San Francisco*	22
Benson, C. B.,	*Modesto*	33
Benson, E. H.,	*Talmage*	11
Benton, J. J.,	*Oakland*	1
Bepler, A. C.,	*San Francisco*	22
Berauer, J. M.,	*Los Angeles*	9
Berejkoff, K. I.,	*San Francisco*	22
Berg, A.,	*San Francisco*	22
Berg, G. O.,	*Hollywood*	9
Berge, F. E.,	*Los Angeles*	9
Berger, A. A.,	*San Francisco*	22
Berger, G.,	*Los Angeles*	9
Bergstrom, F. K.,	*Los Angeles*	9
Berkes, H. A.,	*Los Angeles*	9
Berkley, H. K.,	*Los Angeles*	9
Berkove, S. E.,	*Oakland*	1
Berman, P.,	*Los Angeles*	9
Bernardini, C. V.,	*San Diego*	21
Bernstein, A.,	*San Francisco*	22
Berry, A. J.,	*Los Angeles*	9
Berry, B. S.,	*Santa Maria*	26
Bertero, J.,	*Santa Maria*	26
Bertola, M.,	*San Francisco*	22
Best, E. J.,	*San Francisco*	22
Bettercourt, M. F.,	*Watsonville*	28
Bettin, M. E.,	*Los Angeles*	9
Betts, I. H.,	*Visalia*	35
Bewley, M. H.,	*Los Angeles*	9
Bianchi, J.,	*Ventura*	37
Bice, C. W.,	*Oakland*	1
Bieler, H. G.,	*Pasadena*	9
Bierman, J. M.,	*San Francisco*	22
Bigby, M. H.,	*Whittier*	9
Biggs, E. L.,	*Los Angeles*	9
Bill, P. A.,	*San Francisco*	22
Billingsley, U. C.,	*Oakland*	1
Bilon, L. V.,	*Los Angeles*	9
Bine, R.,	*San Francisco*	22
Bingaman, E. W.,	*Salinas*	13
Bingaman, W. H.,	*Salinas*	13
Binkley, R. W.,	*Selma*	4
Binkley, T.,	*Sacramento*	18
Bird, A. A.,	*Oakland*	1
Bishop, C. R.,	*Long Beach*	9
Birkenstock, C. F.,	*San Diego*	21
Birkenstock, E. F.,	*San Diego*	26
Bishop, C. O.,	*Richmond*	3
Bishop, T. W.,	*S. Pasadena*	9
Bishop, T. E.,	*San Diego*	21
Bittner, C. L.,	*Sacramento*	18
Bittner, L. H.,	*Glendale*	9
Bittner, S. P.,	*Glendale*	9
Bixby, E. M.,	*San Francisco*	22
Black, B. W.,	*Oakland*	1
Black, E. C.,	*San Diego*	21
Black, H.,	*Palo Alto*	27
Blackfield, H. M.,	*San Francisco*	22
Blackmun, E. L.,	*Stockton*	23
Blackshaw, J. B.,	*Oakland*	3
Blaine, E. S.,	*Los Angeles*	9
Blaisdell, F. E., Jr.,	*Watsonville*	28
Blake, C. R.,	*Richmond*	3
Blanchard, L. H.,	*Oakland*	1
Blanchard, T. L.,	*San Jose*	27
Bland, C.,	*Long Beach*	9
Blank, B.,	*Los Angeles*	9
Blatherwick, A. A.,	*Los Angeles*	9
Blatherwick, G. W.,	*Los Angeles*	9
Blecker, R. F.,	*Fresno*	4
Bleecker, John J.,	*Pasadena*	9
Blevins, W. J.,	*Woodland*	38
Blinn, J. F.,	*Stockton*	23
Bliss, G. L.,	*Long Beach*	9
Bliss, W. P.,	*Pasadena*	9
Bloch, J. L.,	*San Pedro*	9
Block, C. A.,	*San Francisco*	22
Blodgett, H. H.,	*Beverly Hills*	9
Blodgett, W. LeR.,	*Calistoga*	14
Blondin, E. A.,	*Ramona*	21
Blong, P. H.,	*Alhambra*	9
Blood, J. N.,	*Redwood City*	25
Bloomfield, A. L.,	*San Francisco*	22
Blum, S.,	*San Francisco*	22
Blumenthal, E. L.,	*Oakland*	1
Bly, F. H.,	*Red Bluff*	34
Boardman, W. W.,	*San Francisco*	22
Bobbitt, J. D.,	*San Diego*	21
Bock, C.,	*Los Angeles*	9
Boe, M. R.,	*Alameda*	1
Boeck, W. C.,	*Los Angeles*	9
Boehm, C. A.,	*San Francisco*	22
Boehm, M. L.,	*Los Angeles*	9
Boehmer, A. C.,	*Lodi*	23
Boericke, C. C.,	*Berkeley*	1
Boetticher, E. O.,	*Los Angeles*	9
Boge, H. G. C.,	*Oakland*	1
Bogen, E.,	*Olive View*	9
Bogle, S. S.,	*Santa Rosa*	32
Bolan, A. E.,	*Los Angeles*	9
Boldemann, L.,	*San Francisco*	22
Boles, A.,	*Oakland*	1
Bolin, Z. E.,	*San Francisco*	22
Bolinger, H. J.,	*Lodi*	23
Boller, S.,	*Los Angeles*	9
Bollig, H. L.,	*Los Angeles*	9
Bolstad, H. C.,	*Oakland*	1
Bolze, E. H.,	*San Francisco*	22
Bond, A. M.,	*Los Angeles*	9
Bond, A. L.,	*Lindsay*	35
Bond, E. C.,	*Hanford*	35
Bond, R. E.,	*Los Angeles*	9
Bonfiglio, J.,	*Hollywood*	9
Bonfiglio, V.,	*Los Angeles*	9
Bonn, H. K.,	*Los Angeles*	9
Bonoff, K. M.,	*Los Angeles*	9
Bonta, M. B.,	*Los Angeles*	9
Bonthius, A.,	*Pasadena*	9
Bonura, F.,	*Los Angeles*	9
Bonynge, C. W.,	*Los Angeles*	9
Boonshaft, L.,	*Santa Clara*	27
Booth, J. A.,	*San Mateo*	25
Booth, M. M.,	*St. Helena*	14
Bormann, G. B.,	*Hollywood*	9
Boskowitz, G. H.,	*San Francisco*	22
Bost, C.,	*San Francisco*	22
Bost, F. C.,	*San Francisco*	22
Bosworth, H. W.,	*Los Angeles*	9
Botsford, M. E.,	*San Francisco*	22
Bourbon, O. P.,	*Los Angeles*	9
Bourn, J. J.,	*San Jose*	27
Bowen, C. B.,	*Oakland*	1
Bowen, D. S.,	*Los Angeles*	9
Bowen, H. A.,	*Los Angeles*	9
Bowen, F. P.,	*Los Angeles*	9
Bowen, W. P.,	*Lindsay*	35
Bower, A. G.,	*Glendale*	9
Bowers, C. H.,	*Los Angeles*	9
Bowers, P. E.,	*Los Angeles*	9

NAME	COUNTY	COUNTY SOCIETY NO.
Bowers, W. S.,	*Los Angeles*	9
Bowles, A. M.,	*Santa Rosa*	32
Bowles, F. H.,	*Oakland*	1
Bowman, P. J.,	*Fort Bragg*	11
Bowman, R. J.,	*Los Angeles*	9
Boyce, L.,	*Los Angeles*	9
Boyce, W. A.,	*Los Angeles*	9
Boyd, E. G.,	*Los Angeles*	9
Boyd, E. F.,	*Los Angeles*	9
Boyd, J. P.,	*Santa Ana*	15
Boyd, R. T.,	*San Francisco*	22
Boyd, T. O.,	*Long Beach*	9
Boyd, W. H.,	*Long Beach*	9
Boyer, H. R.,	*Glendale*	9
Boyer, J. L.,	*Long Beach*	9
Boyer, K. H.,	*Los Angeles*	9
Boyers, L. M.,	*Berkeley*	1
Braafladt, L. H.,	*North Sacramento*	18
Bradfield, J. H.,	*Monterey*	13
Bramhall, R. N.,	*Sacramento*	18
Bramkamp, A. L.,	*Banning*	17
Bramwell, L.,	*Orange*	15
Branch, W. E.,	*Los Angeles*	9
Brandel, H. M.,	*Los Angeles*	9
Brandes, L.,	*Los Angeles*	9
Brandt, F. H.,	*Los Angeles*	9
Brastad, J. P.,	*Anaheim*	15
Brazelton, H.,	*Oakland*	1
Breed, L. M.,	*Pasadena*	9
Breitman, H. B.,	*Los Angeles*	9
Breitstein, L. I.,	*San Francisco*	22
Brem, W. V.,	*Los Angeles*	9
Brendel, F. P.,	*Sacramento*	18
Breslin, F. J.,	*Los Angeles*	9
Brewer, L. C.,	*Los Angeles*	9
Breyer, J. H.,	*Pasadena*	9
Bricca, C. R.,	*San Francisco*	22
Brier, I. P.,	*Olive View*	9
Briggs, G. A.,	*Sacramento*	18
Briggs, LeR H.,	*San Francisco*	22
Briggs, W. R.,	*Sacramento*	18
Briggs, W. M.,	*Monrovia*	9
Brigham, E.,	*Dinuba*	35
Brill, W.,	*Los Angeles*	9
Brinckerhoff, E. E.,	*Oakland*	1
Briner, C. C.,	*Auburn*	16
Briner, M. S.,	*Lincoln*	16
Broaddus, C. A.,	*Stockton*	23
Brockow, J. L.,	*Los Angeles*	9
Brockway, A.,	*Los Angeles*	9
Brodovsky, D.,	*San Jose*	27
Broemser, M. A.,	*San Jose*	4
Bronfeld, N.,	*Los Angeles*	9
Brooks, C. S.,	*El Centro*	6
Brooks, E. R.,	*Camino*	1
Brooks, H. T.,	*Alhambra*	9
Brooks, LeR.,	*San Francisco*	22
Brooks, T. C.,	*Los Angeles*	9
Bross, R. B.,	*Los Angeles*	9
Broughton, G. A.,	*Ventura*	37
Brown, A.,	*San Francisco*	22
Brown, A. L.,	*Riverside*	17
Brown, A. L.,	*San Francisco*	22
Brown, B.,	*Sacramento*	18
Brown, B. P.,	*Los Angeles*	9
Brown, B. C. B.,	*Los Angeles*	9
Brown, C.,	*San Francisco*	22
Brown, C. W.,	*San Diego*	21
Brown, C. W.,	*San Diego*	21
Brown, C. M.,	*Los Angeles*	9
Brown, D. F.,	*Redwood City*	25
Brown, E. O.,	*Sacramento*	18
Brown, F. A.,	*Santa Ana*	15
Brown, F. A.,	*Hayward*	1
Brown, G. D.,	*Pomona*	9
Brown, G. W.,	*Los Angeles*	9
Brown, H. V.,	*Glendale*	9
Brown, H. A.,	*San Francisco*	22
Brown, H. A.,	*Berkeley*	1
Brown, H. C.,	*San Jose*	27
Brown, J. C.,	*Los Angeles*	9
Brown, J. M.,	*Los Angeles*	9
Brown, J. R.,	*Los Angeles*	9
Brown, M. H.,	*Los Angeles*	9
Brown, N. N.,	*Bakersfield*	7
Brown, P. K.,	*San Francisco*	22
Brown, R.,	*Santa Barbara*	26
Brown, R.,	*San Francisco*	22
Brown, R. H.,	*Pasadena*	9
Brown, T. H.,	*Orland*	38
Brown, W. H.,	*Palo Alto*	27
Brown, W. K.,	*San Diego*	21
Browne, F. E.,	*Los Angeles*	9
Browne, G. C.,	*Oakland*	1
Brownfield, W. H.,	*Los Angeles*	9
Browning, C. C.,	*San Marino*	9
Brownlie, J. W.,	*Vallejo*	31
Brownsberger, E. M.,	*Los Angeles*	9
Bruck, E. L.,	*San Francisco*	22
Bruckman, H.,	*San Jose*	27
Bruff, W. C.,	*Whittier*	9
Bruin, M. R.,	*Los Angeles*	9
Bruman, A. K.,	*San Francisco*	22
Brumbaugh, D. H.,	*Redlands*	20
Brumwell, D.,	*King City*	13
Brunemeier, E. H.,	*Placentia*	15
Bruner, F. M.,	*Ferndale*	5
Brunie, L. J.,	*Santa Barbara*	26
Brunie, Y. S.,	*Los Angeles*	26
Brunn, H.,	*San Francisco*	22
Brusco, H. D.,	*San Francisco*	22
Brush, N. H.,	*Santa Barbara*	26
Brust, P. R.,	*San Diego*	21
Bryan, L.,	*San Francisco*	22
Bryant, D. C.,	*Claremont*	9
Bryant, E. A.,	*Los Angeles*	9
Bryant, H. E.,	*Los Angeles*	9
Buchanan, R. A.,	*Lodi*	23
Bucher, W. H.,	*Olive View*	9
Buck, L. W.,	*San Francisco*	22
Buckell, A. E. T.,	*Oakland*	1
Buckingham, J. R.,	*Los Angeles*	9
Buckley, E. J.,	*San Francisco*	22
Buckley, T. I.,	*Oakland*	1
Bucknam, R. W.,	*Hollywood*	9
Budge, E. S.,	*Los Angeles*	9
Bull, E. C.,	*San Francisco*	22
Bullard, C. T.,	*King City*	13
Bullington, P. F.,	*Chico*	2
Bullis, J. A. E.,	*Los Angeles*	9
Bullis, R. O.,	*Los Angeles*	9
Bullitt, J. B.,	*San Jose*	27
Bullock, A. S.,	*Alhambra*	9
Bulpitt, H. G.,	*Santa Monica*	9
Bulpitt, J. M.,	*Santa Ana*	15
Bulpitt, P. A.,	*Santa Monica*	9
Bulpitt, Z. E. N.,	*Santa Ana*	15
Bulson, C. H.,	*Napa*	14
Bumgarner, G. M.,	*Richmond*	3
Bumgarner, J. W.,	*Richmond*	3
Bunnell, S.,	*San Francisco*	22
Burchardi, K. G. H.,	*Los Angeles*	9
Burchfiel, C. M.,	*San Jose*	27
Burden, H. S.,	*Sacramento*	18
Burg, B.,	*Oakland*	1
Burgan, J. H.,	*Los Angeles*	9
Burge, M. H.,	*Los Angeles*	9
Burger, F. A.,	*El Centro*	6
Burger, T. O.,	*San Diego*	21
Burgeson, S. D., Jr.,	*Los Angeles*	9
Burgess, G. W.,	*Guerneville*	32
Burk, C. E.,	*Loma Linda*	20
Burk, E. E.,	*Los Angeles*	9
Burke, A. M. B.,	*Alameda*	1
Burke, D. V.,	*Berkeley*	1
Burke, E. W.,	*Redlands*	20
Burke, G. R.,	*Alameda*	1
Burkelman, A.,	*Los Angeles*	9
Burkett, R. C.,	*Los Angeles*	9
Burkhard, W. G.,	*San Francisco*	22
Burks, F. L. R.,	*Fresno*	4
Burlew, J. M.,	*Santa Ana*	15
Burlingame, R. W.,	*San Francisco*	22
Burnap, S. R.,	*Los Angeles*	9
Burnett, C. I.,	*Susanville*	8
Burnham, C. J.,	*Berkeley*	1
Burnham, C. J., Jr.,	*Berkeley*	1
Burnham, DeW., K.,	*San Francisco*	22
Burnham, P. S.,	*Los Angeles*	9
Burns, E. M.,	*Huntington Park*	9
Burns, G. C.,	*Los Angeles*	9
Burns, T. S.,	*San Francisco*	22
Burnside, C.,	*Hollywood*	9
Burrall, G. M.,	*Los Angeles*	9
Burrows, C. A.,	*Los Angeles*	9
Burrows, J. R.,	*San Francisco*	22
Burrows, L. A.,	*Los Angeles*	9
Burrows, M. T.,	*Pasadena*	9
Bursell, A.,	*Mountain View*	27
Burtness, H. I.,	*Santa Barbara*	26
Burton, F. A.,	*San Diego*	21
Burwell, L. C.,	*Los Angeles*	9
Busby, J. L.,	*Pasadena*	9
Bush, H. C.,	*Livermore*	1
Buskirk, W. H.,	*Los Angeles*	9
Bussey, D. G.,	*Avalon*	9
Butin, M. R.,	*Madera*	4
Butka, L. J.,	*Alhambra*	9
Butler, E.,	*San Francisco*	22
Butler, F. O.,	*Eldridge*	32
Butler, K. W.,	*Madera*	4
Butler, O. W.,	*Los Angeles*	9
Butler, W. D.,	*San Luis Obispo*	24
But, E. G.,	*Redondo Beach*	9
Butterfield, A. DeF.,	*National City*	21
Butterfield, E. R.,	*Burbank*	9
Byers, W. M.,	*Van Nuys*	9
Byington, F. S.,	*Los Angeles*	9
Byington, P. C.,	*Modesto*	33
Byrnes, R. L.,	*Los Angeles*	9
Byron, R. L.,	*Los Angeles*	9
Byron, W. P.,	*Lemoore*	4

C

Cady, D. W.,	*Pasadena*	9
Cady, F. P.,	*Los Angeles*	9
Cahen, C. G.,	*Los Angeles*	9
Cahoon, G. W.,	*Los Angeles*	9
Cain, W. T.,	*Gardena*	9
Calaway, A. A.,	*Fresno*	4
Calder, D. H.,	*Los Angeles*	9
Calkins, J. W.,	*Oakland*	1
Callander, C. L.,	*San Francisco*	22
Callaway, W. O.,	*Burlingame*	25
Callison, F. W.,	*San Francisco*	22
Calvi, P. J.,	*San Francisco*	22
Calvin, G. F.,	*Oakland*	1
Cameron, L. C.,	*Santa Ana*	15
Cameron, M. C.,	*Los Angeles*	9
Camp, J. W.,	*La Habra*	15
Campbell, C. R.,	*San Jose*	27
Campbell, C. C.,	*Long Beach*	9
Campbell, G. E.,	*Pasadena*	9
Campbell, H. G.,	*Lindsay*	35
Campbell, H. S.,	*Los Angeles*	9
Campbell, J. V.,	*Oakland*	1
Campbell, J.,	*Pasadena*	9
Campbell, L. G.,	*Pasadena*	9
Campbell, L. D.,	*San Jose*	27
Campbell, L. S.,	*Los Angeles*	9
Campbell, M. P.,	*San Francisco*	22
Campbell, M.,	*Los Angeles*	9
Campbell, V. E.,	*Fresno*	4
Campbell, W. H.,	*Santa Barbara*	26
Campiche, P. S.,	*San Francisco*	22
Canby, C. B.,	*Van Nuys*	9
Cancio, C. K.,	*San Jose*	27
Cannon, F. M.,	*Point Reyes*	10
Cantoni, A. J.,	*San Diego*	21
Card, T. A.,	*Riverside*	17
Carden, J. J.,	*San Francisco*	1
Carey, G. H.,	*Los Angeles*	9
Carey, H. B.,	*San Francisco*	22
Carey, T. S.,	*Los Angeles*	9
Carhart, E. C.,	*Hollywood*	9
Carlile, M. N.,	*Lakeside*	21
Carlson C. M.,	*Santa Rosa*	32
Carlson, E.,	*San Francisco*	22
Carlson, F. J.,	*Oakland*	1
Carmack, J. C.,	*San Bernardino*	20
Carpenter, F. L.,	*Berkeley*	1
Carpenter, H. C.,	*Berkeley*	1
Carpenter, H. L.,	*Richmond*	3
Carroll, J. J.,	*San Francisco*	22
Carroll, W. A.,	*San Francisco*	22
Carson, D. A.,	*San Francisco*	22
Carson, G. R.,	*San Francisco*	22
Carter, A. E.,	*North Hollywood*	9
Carter, C. E.,	*Pasadena*	9
Carter, F. H.,	*San Diego*	21
Carter, M. G.,	*Los Angeles*	9
Carter, R. A.,	*Los Angeles*	9
Carter, R. S.,	*San Diego*	21
Carter, W. E.,	*San Francisco*	1
Carter, W. N.,	*Los Angeles*	9
Cartmell, T. M.,	*Los Angeles*	9
Cartwright, E. W.,	*Oceanside*	21
Carver, W. F.,	*Hollywod*	9
Cary, N. A.,	*Oakland*	1
Case, C. E.,	*Santa Maria*	26
Casey, T. J.,	*Oakland*	1
Caskey, C. R.,	*Los Angeles*	9
Casper, E. J.,	*San Francisco*	22
Casse, D.,	*Los Angeles*	9
Cassell, I.,	*San Francisco*	27
Catton, J.,	*San Francisco*	22
Cave, H. A.,	*San Diego*	21
Cavanaugh, L. A.,	*Santa Barbara*	26
Cecil, A. B.,	*Los Angeles*	9
Cecil, J. J.,	*Patton*	20
Cerf, A. E.,	*San Francisco*	22
Chaffee, B. S.,	*Long Beach*	9
Chaffin, G. L.,	*Los Angeles*	9
Chaffin, R. C.,	*Los Angeles*	9
Chaimov, A. S.,	*San Francisco*	22
Chain, J. N.,	*Eureka*	5
Chaloupka, H. R.,	*Los Angeles*	9
Chamberlain, B. H.,	*Alhambra*	9
Chamberlain, E. F.,	*San Diego*	21
Chamberlain, G. L.,	*Oakland*	1
Chamberlain, W. E.,	*Philadelphia*	22
Chamberlin, H. H.,	*Glendora*	9
Chambers, S. O.,	*Los Angeles*	9
Chambers, W. E.,	*Kansas City*	1
Champion, J. A.,	*Colton*	20
Chandler, L. R.,	*San Francisco*	22
Chaney, L. A.,	*Los Angeles*	9
Chang, D. K.,	*San Francisco*	22
Channell, W. L.,	*Oakland*	1
Chapline, F. L.,	*Orange*	15
Chapman, G. E.,	*San Francisco*	22
Chapman, H. S.,	*Stockton*	23
Chapman, J. L.,	*Los Angeles*	9
Chapman, J. F.,	*Pasadena*	9
Chapman, L. S.,	*Los Angeles*	9
Chapman, L. E.,	*Gerber*	34
Chapman, W. M.,	*Ontario*	20
Chapman, W. H.,	*Blythe*	17
Chappell, A. E.,	*Imola*	14
Chappell, H. W.,	*Los Angeles*	9
Chappell, G. E.,	*Sacramento*	18

NAME	COUNTY	COUNTY SOCIETY NO.
Charlesworth, I. E., *Imola*		14
Charlton, A. T., *Whittier*		9
Charlton, C. F., *Pasadena*		9
Charnock, D. A., *Los Angeles*		9
Chase, A. E., *Santa Ana*		15
Chase, F. H., *Los Angeles*		9
Chase, R. E., *Glendale*		9
Chavez, M., *Los Angeles*		9
Cheney, G., *San Francisco*		22
Cheney, L. D., *Los Angeles*		9
Cheney, M. C., *Berkeley*		1
Cheney, W. F., *San Francisco*		22
Cherry, C. F., *Los Angeles*		9
Cherry, W. S., *Rialto*		20
Chessman, F. N., *Los Angeles*		9
Chiapella, J. O., *Chico*		2
Chidester, W. C., *San Mateo*		25
Childers, L. A., *San Jose*		27
Childress, M. H., *Ione*		18
Childrey, J. H., *Santa Barbara*		26
Chilton, F. N., *San Jose*		27
Ching, P. S., *Fresno*		4
Chipman, E. D., *San Francisco*		22
Chipman, W. D., *Los Angeles*		9
Choate, J. L., *Los Angeles*		9
Chouret, E. E., *Riverbank*		33
Christensen, A. C., *Glendale*		9
Christensen, G. E., *Los Angeles*		9
Christensen, W., *Los Angeles*		9
Christian, J. T., *Galt*		18
Christie, R. C., *Long Beach*		9
Christierson, S. von, *San Francisco*		22
Christman, P. W., *Sacramento*		18
Christopherson, E. H., *San Diego*		21
Church, C. H., *Berkeley*		1
Church, I. O., *Oakland*		3
Church, M. V., *Norwalk*		9
Churchill, J. F., *San Diego*		21
Cilley, H. A., *San Jose*		27
Citron, J. W., *Oakland*		1
Clark, C. W., *San Rafael*		10
Clark, D. M., *Santa Barbara*		26
Clark, D G., *Santa Paula*		37
Clark, E. P., *Los Angeles*		9
Clark, E. B., *Stanford University*		27
Clark, G. S., *Los Angeles*		9
Clark, I. S., *Long Beach*		9
Clark, J. W., *Santa Rosa*		32
Clark, J. A., *Gilroy*		27
Clark, J. I., *Santa Ana*		15
Clark, J., *Gilroy*		27
Clark, L. J., *Hemet*		17
Clark, M. E., *Los Angeles*		9
Clark, M. F., *San Francisco*		1
Clark, T. J., *Oakland*		1
Clark, V. G., *San Diego*		21
Clark, W. F., *Los Angeles*		9
Clark, W. S., *Ventura*		37
Clark, W. A., *Pasadena*		9
Clark, W. R. P., *San Francisco*		22
Clarke, A. F., *Oakland*		1
Clarke, F. B., *Long Beach*		9
Clarke, G. W., *San Bernardino*		20
Clarke, L. H., *Riverside*		17
Clarke, R. M., *Los Angeles*		9
Clarke, W. T., *Los Angeles*		9
Clattenburg, H. A., *Redwood City*		25
Clay, H. E., *San Francisco*		22
Clayes, W. I., *San Francisco*		22
Clayton, J. H., *Los Angeles*		9
Cleary, E. W., *San Francisco*		22
Cleary, G. G., *San Francisco*		22
Cleeves, M., *La Crescenta*		9
Cleland, H. O., *Ukiah*		11
Clemons, E. J., *Los Angeles*		9
Cleveland, L. S., *San Jose*		27
Cline, J. W., *San Francisco*		22
Close, K M, *Los Angeles*		9
Clough F. E., *San Bernardino*		20
Clymer, H. V., *Fairfield*		31
Coates, G. L., Jr., *Martinez*		3
Coblentz, L. B., *San Francisco*		22
Coblentz, Z. B., *Santa Maria*		26
Cochran, G. V., *Oakland*		1
Cochran, G. H., *Los Angeles*		9
Cochran, R. C., *Yorba Linda*		15
Coe, H. C., *Oakland*		1
Coeur-Barron, F. H., *Los Angeles*		9
Coffey, G. C., *Ventura*		37
Coffey, E. C., *Orland*		38
Coffey, H. E., *San Francisco*		22
Coffey, S. E., *Orland*		38
Coffey, T. J., *Los Angeles*		9
Coffey, W. B., *San Francisco*		22
Coffin, C. C., *Oakland*		1
Coffin, H. W., *Los Angeles*		9
Coghlan, C. C., *Los Angeles*		9
Cohn, A. L., *San Francisco*		22
Cohn, H. J., *San Francisco*		22
Cohn, J., *Los Angeles*		9
Cohn, M. L., *San Francisco*		22
Cohn, S., *San Francisco*		22
Colburn, J. M., *Riverside*		17
Colby, E. G., *San Diego*		21
Cole, G. L., *Los Angeles*		9
Cole, W., *Long Beach*		9
Coleman, B. E., *Los Angeles*		9
Coleman, F. D., *Los Angeles*		9
Coller, G. J., *Los Angeles*		9
Collings, H. A., *Susanville*		8
Collins, A. W., *San Francisco*		22
Collins, C. D., *Fresno*		4
Collins, F. K., *Los Angeles*		9
Collins, J. L., *Turlock*		33
Collins, M. C., *Turlock*		33
Collischonn, P., *San Francisco*		22
Colver, B. N., *Glendale*		9
Comfort, H. W., *Fortuna*		5
Commons, E. L., *Los Angeles*		9
Compton, C. S., *Bakersfield*		7
Comstock, B. W., *Los Angeles*		9
Comstock, D. D., *Los Angeles*		9
Condit, J. C., *Oakland*		1
Condit, J. D., *Pasadena*		9
Conerty, J. M., *Los Angeles*		9
Congdon, W. R., *Santa Cruz*		28
Conlan, F. J. S., *San Francisco*		22
Conlan, P. T., *Los Angeles*		9
Conley, W. T., *Hollywood*		9
Conn, C. E., *Los Angeles*		9
Connell, J. A., *Riverside*		17
Conner, A. W., *San Jose*		27
Connolly, T. W., *San Francisco*		22
Conover, G. D., *Santa Monica*		9
Conser, W. H., *Guadalupe*		26
Conzelmann, F. J., *Stockton*		23
Cooder, H. R., *Los Angeles*		9
Coodley, O., *Los Angeles*		9
Cook, C. S., *Los Angeles*		9
Cook, C. W., *Los Angeles*		9
Cook, E. J., *Los Angeles*		9
Cook, E. F., *Los Angeles*		9
Cook, E. P., *San Jose*		27
Cook, J. D., *Olive View*		9
Cook, K. D., *Maricopa*		7
Cook, O. S., *Sacramento*		18
Cook, W. C., *Los Angeles*		9
Cook, W. P., *Los Angeles*		9
Cooke, A. B., *Los Angeles*		9
Cooke, H. T., *Los Angeles*		9
Cooke, W. C., *San Diego*		21
Cooley, C. L., *San Francisco*		22
Coon, G. W., *Riverside*		17
Cooper, A. J., *San Diego*		21
Cooper, B., *Arcata*		5
Cooper, C. M., *San Francisco*		22
Cooper, F. G., *Huntington Park*		9
Cooper, G. P., *Angels Camp*		23
Cooper, J. A., *Modesto*		33
Cooper, T. E., *Davis*		38
Cooper, W., *Palo Alto*		27
Copeland, J. A., *Long Beach*		7
Copp, E. F. F., *La Jolla*		21
Corbin, D. E., *San Diego*		21
Cordes, F. C., *San Francisco*		22
Cordua, O. B., *San Diego*		21
Cornell, C. E., *Los Angeles*		9
Cornell, H. D., *San Diego*		21
Corneille, J. G., *Berkeley*		1
Cornett, W. F., *Pasadena*		9
Cornwall, T. W., *San Francisco*		22
Corr, W. P., *Los Angeles*		9
Cortright, C. B., *Berkeley*		1
Cosgrove, C. P., *Los Angeles*		9
Cosgrove, J. B., *Los Angeles*		9
Costar, W. J., Jr., *Chico*		2
Costolow, W. E., *Los Angeles*		9
Cottle, C. C., *Los Angeles*		9
Cottrell, C. C., *Scotia*		5
Cottrell, E. L., *San Jose*		27
Cottrell, J. C., *Long Beach*		9
Couey, E. J., *Fresno*		4
Coulter, H. M., *South Pasadena*		9
Counter, C. E., *Buena Park*		15
Covington, L. C., *La Mesa*		21
Cowan, A. B., *Fresno*		4
Cowgill, C. H., *Huntington Park*		9
Cowin C. C., *Hollywood*		9
Cowles, D. C., *Fullerton*		15
Cox, B. E., *Fresno*		4
Cox, G. W., *San Francisco*		22
Cox, J. E., *Coalinga*		4
Cox, T. J., *San Francisco*		22
Cox, W. J., *San Francisco*		22
Coyle, J. D., *Sacramento*		18
Coyne, A. E., *Los Angeles*		9
Crabtree, E. H., *San Diego*		21
Crabtree, E. G., *San Diego*		21
Crabtree, W. C., *San Diego*		21
Craft, E. D., *Los Angeles*		9
Crafts, J. G., *Brentwood*		3
Crahan, M. E., *Los Angeles*		9
Craig, J. B., *Upland*		20
Craig, L. G., *Pasadena*		9
Craig, R. G., *San Francisco*		22
Craig, S. A., *Ontario*		20
Cralk, C. W., *Venice*		9
Crane, C. C., *San Francisco*		22
Crane, C., *Fernbridge*		5
Crane, E. H., *Inglewood*		9
Crane, H. W., *Berkeley*		1
Crane, J. J., *Los Angeles*		9
Crane, W. R., *Los Angeles*		9
Crane, W. W., *Oakland*		1
Crase, H. R. *Los Angeles*		9
Craven, L. L., *Glendale*		9
Craviotto, J. V., *Stockton*		23
Crawford, J. C., *Orange*		15
Crawford, W. W., *San Diego*		21
Crease, F. J., *Bakersfield*		9
Crease, H. G., *Bakersfield*		7
Cress, W. W., *Sacramento*		18
Cresson, M., *Santa Barbara*		26
Crew D. A., *San Luis Obispo*		24
Criley, C. H., *Los Angeles*		9
Crisp, N. J., *Benicia*		31
Crispin, E. L., *Los Angeles*		9
Crockett, C. A., *San Francisco*		22
Crooks, S A., *Loma Linda*		20
Crosby, D., *Oakland*		1
Cross, W. W., *Oakland*		1
Crossan, J. W., *Los Angeles*		9
Crossen, A. S., *Weimar*		16
Crow, L. B., *San Francisco*		22
Crowe, H. E., *Los Angeles*		9
Crowl, V. C., *Huntington Park*		9
Crowley, E., *Santa Maria*		26
Crozier, H. C., *Los Angeles*		9
Cruden, A. W., *Santa Barbara*		26
Cruikshank, G. H., *San Diego*		21
Crum, H. C., *Alameda*		1
Crummer, L., *Los Angeles*		9
Crusan, R. E., *Monrovia*		9
Crutchett, W. L., *Marysville*		39
Cryst, J. H., *Los Angeles*		9
Cummings, J. C., *Glendale*		9
Cummings, R. S., *Los Angeles*		9
Cummings, R. A., *Los Angeles*		9
Cummins, F. A., *Los Angeles*		9
Cuneo, J. C., *San Jose*		27
Cuneo, P. J., *Bakersfield*		7
Cunha, F., *San Francisco*		22
Cunnane, P. J., *Los Angeles*		9
Cunnane, T. B., *Los Angeles*		9
Cunningham, R. L., *Los Angeles*		9
Cunningham, R. L., *Berkeley*		1
Cunningham, T. M., *La Mesa*		21
Cunningham, W. E., *Richmond*		3
Curdts, C. E., *Oakland*		1
Currey, H. M., *Santa Ana*		15
Currie, A. H., *Los Angeles*		9
Curtis, C. G., *Brea*		15
Curtis, L. E., *San Francisco*		22
Cushman, G. F., *San Francisco*		22
Cushman, R. A., *Talmage*		11
Custer, L. R., *San Francisco*		22
Cutler, O. I., *Loma Linda*		20
Cutter, R. K., *Berkeley*		1
Cutting, G. R., *Delano*		7
Cutting, J. A., *Agnew*		27

D

Dabney, T. G., *San Francisco*		1
Daggett, E. H., *Oakland*		1
Dahleen, H. E., *San Jose*		27
Dahlgren, R. W., *Fresno*		4
Dailey, W. J., *Oakland*		1
Daily, K., *Richmond*		3
Dakin, W. B., *Los Angeles*		9
Dale, C. L., *Loma Linda*		20
d'Alessio, J. A., *Santa Barbara*		26
Dallal, J. M., *San Mateo*		25
Dallas, D. A., *San Francisco*		22
Daly, L. E., *Needles*		20
Damerson, J. D., *Stockton*		23
Daniel, W. H., *Los Angeles*		9
Dannenbaum, S. R., *San Francisco*		22
Darling, H. H., *San Francisco*		22
Dart, A. E., *Oakland*		1
Dashiell, W. A., *Los Angeles*		9
Dasse, H. W., *Los Angeles*		9
Dassett, J. W. *Los Angeles*		9
Dau, N J., *Fresno*		4
Daughters, H. G., *Los Angeles*		9
Davenport, J. D., *Los Angeles*		9
David, N. A., *Morgantown, W. Va.*		22
David, R. A., *Los Angeles*		9
Davidson, B. R., *Brawley*		6
Davidson, W. T., *Carmel*		13
Davies, B. C., *Los Angeles*		9
Davis, A. D., *San Francisco*		22
Davis, A. S., *Oakland*		1
Davis, C. L., *San Diego*		21
Davis, E. A., *San Francisco*		22
Davis, E. J., *San Diego*		21
Davis, F. J., *Westwood*		8
Davis, H. H., *El Segundo*		9
Davis, H. W., *San Francisco*		22
Davis, H. C., *San Francisco*		22
Davis, H. J., *Sacramento*		18
Davis, J. D., *Los Angeles*		9

NAME	COUNTY	COUNTY SOCIETY NO.
Davis, K. S.,	*Los Angeles*	9
Davison, C. L.,	*Los Angeles*	9
Davison, J. T.,	*Stockton*	23
Davison, S. T.,	*San Francisco*	22
Davitt, G. G.,	*Los Angeles*	9
Davlin, L. P.,	*Gonzales*	13
Dawson, G. I.,	*Napa*	14
Day, E. C.,	*Laguna Beach*	15
Day, P. W.,	*Represa*	18
Day, R. V.,	*Los Angeles*	9
Dayton, G. O.,	*Los Angeles*	9
Dazey, G. K.,	*Venice*	9
Deacon, G.,	*Pasadena*	9
Dean, J. R.,	*Los Angeles*	9
Deane, L. C.,	*San Francisco*	22
Dearing, B. F.,	*San Francisco*	22
Debenham, M. W.,	*San Francisco*	22
Dearborn, R. R.,	*Madera*	3
Decker, C. W.,	*Los Angeles*	9
Deering, W. E.,	*Hollywood*	9
Delamere, G. S.,	*Marysville*	39
DeLancey, C. A.,	*San Rafael*	10
DeLappe, F. R.,	*Modesto*	33
Delprat, G. D., Jr.,	*San Francisco*	22
Delprat, J. L. P.,	*San Francisco*	22
DeLucis, A.,	*San Francisco*	22
Dempsey, R. B.,	*Vallejo*	31
Denman, C. H.,	*Berkeley*	1
Dennis, H. O.,	*Beverly Hills*	9
Denton, W. L.,	*Trona*	20
DePuy, C. A.,	*Oakland*	1
Derrick, J. S.,	*Los Angeles*	9
Desimone, L. O.,	*Los Angeles*	9
Desparois, G. B.,	*Los Angeles*	9
Desrosier, G. W.,	*Colusa*	38
Desser, A. L.,	*Los Angeles*	9
Detling, F. E.,	*Los Angeles*	9
Detrick, H. H.,	*Beverly Hills*	9
Dewey, E. B.,	*Pasadena*	9
Dewey, H. G.,	*Yosemite*	12
Dewey, R. S.,	*LaCanada*	9
Dick, P. J.,	*Oakland*	1
Dickerson, W. L.,	*Long Beach*	9
Dickey, C. D., Jr.,	*Los Angeles*	9
Dickey, C. A.,	*San Francisco*	22
Dickie, W. M.,	*Berkeley*	1
Dickinson, A. E.,	*Los Gatos*	27
Dickinson, C. C.,	*McCloud*	30
Dickson, A. R.,	*Los Angeles*	9
Dickson, E. C.,	*San Francisco*	22
Dickson, G. G.,	*Los Angeles*	9
Didier, F. W.,	*Wheatland*	39
Diederich, O. P.,	*Fresno*	4
Diefenbach, W. E.,	*La Jolla*	21
Diepenbrock, A. B.,	*San Francisco*	22
Dietderich, C. E.,	*San Francisco*	22
Dieterle, K. L,	*Los Angeles*	9
Dietrich, H.,	*Los Angeles*	9
Dietz, H. L.,	*Oakland*	1
Diggs, C. S.,	*Los Angeles*	9
Dignan, H. H.,	*San Francisco*	22
Dillingham, F. S.,	*Los Angeles*	9
Dillon, E. T.,	*Los Angeles*	9
Dillon, G. P.,	*Sacramento*	18
Dillon, J. R.,	*San Francisco*	22
Dillon, V. M.,	*San Francisco*	22
Dilworth, W. D.,	*Pasadena*	9
Dingeman, F. J.,	*San Diego*	21
Divanovich, D.,	*San Francisco*	22
Dixon, H. L.,	*Southgate*	9
Dixon, H. B.,	*San Francisco*	22
Doane, F. L.,	*Red Bluff*	34
Doane, P. S.,	*Pasadena*	9
Dock, G.,	*Pasadena*	9
Dock, W.,	*San Francisco*	22
Dodge, G. E.,	*Los Angeles*	9
Dodge, W.,	*Los Angeles*	9
Dolan, P. E.,	*Livermore*	1
Dole, K. L.,	*Redlands*	20
Dolley, F. S.,	*Los Angeles*	9
Dolman, P.,	*San Francisco*	22
Domann, A. H.,	*Orange*	15
Donald, W. G.,	*Berkeley*	1
Donelan, J. P.,	*Los Angeles*	9
Donnell, R. H.,	*San Diego*	21
Donohoe, E. C.,	*Glendale*	9
Donovan, M.,	*San Francisco*	22
Doran, A. V.,	*Vallejo*	31
Doria, M. M., Jr.,	*San Diego*	21
Dormody, H. L.,	*Monterey*	13
Dormody. H. F.,	*Monterey*	13
Dorn, J. H.,	*San Francisco*	22
Dorr, W. R.,	*Arlington*	17
Dostal, R. J.,	*Santa Monica*	9
Dotson, E. E., Jr.,	*Escondido*	21
Dougall, J. P.,	*Los Angeles*	9
Dougan, S.,	*San Jose*	27
Dougherty, E. E.,	*Los Angeles*	9
Dougherty, J. A.,	*Oakland*	1
Dougherty, P. S.,	*Los Angeles*	9
Doughty, J. F.,	*Tracy*	23
Douglass, P.,	*Keene*	7
Doupe, R. G.,	*Tehachapi*	7
Dow, J. N.,	*Los Angeles*	9
Dowd, R. E.,	*San Bernardino*	20
Dowling, S. W.,	*Santa Cruz*	28
Downing, S. R.,	*Oakland*	1
Downs, A. J.,	*Los Angeles*	9
Downs, L.,	*Hollywood*	9
Doyle, G. P.,	*Berkeley*	1
Doyle, J. C.,	*Los Angeles*	9
Doyle, J. B.,	*Los Angeles*	9
Doyle, J. J. L.,	*Chico*	2
Dozier, D. F.,	*Sacramento*	18
Dozier, E.,	*Redding*	29
Dozier, L.,	*Stockton*	23
Drace, C. G.,	*Ojai*	37
Dragoo, S. V.,	*Avenal*	4
Drake, D. D.,	*San Francisco*	22
Drake, J. C.,	*Kerman*	4
Draper, D. B.,	*San Jose*	27
Dray, F. R.,	*San Francisco*	22
Drees, L. A.,	*San Francisco*	22
Drennan, P. G.,	*Oakland*	1
Dresel, R. L.,	*San Francisco*	22
Drew, J. F.,	*Walnut Grove*	18
Driver, C. O.,	*Los Angeles*	9
Drucks, E. S.,	*Oakland*	1
Dryden, F. M.,	*Pasadena*	9
Dryer, D. S.,	*Los Angeles*	9
Drysdale, G. N.,	*Sacramento*	18
DuBois, C. W.,	*Los Angeles*	9
Dubois, W. C.,	*Santa Ana*	15
DuBray, E. S.,	*San Francisco*	22
Dudley, H. W.,	*San Rafael*	10
Dufficy, G. W.,	*Sacramento*	18
Duffield, W.,	*Los Angeles*	9
Duggan, H.,	*San Francisco*	22
Dukes, C. A.,	*Oakland*	1
Dunbar, W. V.,	*San Pedro*	9
Duncan, J. A.,	*Marysville*	39
Duncan, M. V.,	*Lompoc*	26
Duncan, R. D.,	*Los Angeles*	9
Duncan, W. C.,	*Los Angeles*	9
Dundas, R. C.,	*Los Angeles*	9
Dunlevitz, M.,	*Auburn*	16
Dunklee, G. K.,	*San Luis Obispo*	24
Dunlap, A. K.,	*Sacramento*	18
Dunlop, J.,	*Pasadena*	9
Dunn, R. H.,	*San Francisco*	22
Dunn, R. D.,	*San Francisco*	22
Dunne, N. P.,	*Oakland*	1
Dunphy, J. M.,	*Santa Cruz*	28
Dunsmoor, N. C.,	*Los Angeles*	9
Dunsmoor, R. M.,	*Los Angeles*	9
Dupuich, L. R.,	*Oakland*	1
Durbin, M. M.,	*Pasadena*	9
Durgin, R. M.,	*Berkeley*	1
Durr, S. A.,	*San Diego*	21
Dutcher, W.,	*Los Angeles*	9
Dutton, M. L.,	*San Francisco*	22
Duvall, E. M.,	*Long Beach*	9
Dye, W. G.,	*Los Angeles*	9
Dyke, L. H.,	*Oakland*	1
Dykes, H. R.,	*Taft*	7
Dyment, B. S.,	*Stanford University*	27
Dysart, B. R.,	*Pasadena*	9

E

Eager, B. E.,	*San Diego*	21
Eakin, M. A.,	*San Francisco*	22
Earl, H., D.,	*San Pedro*	9
Earle, L. M.,	*Los Angeles*	9
Early, C. E.,	*Los Angeles*	9
Eastman, W. R.,	*La Jolla*	21
Easton, D. E. F.,	*San Francisco*	22
Eaton, G. L.,	*San Francisco*	22
Eaton, H. D.,	*Los Angeles*	9
Eaton, J. L.,	*Berkeley*	1
Eaton, W. H.,	*Santa Barbara*	26
Eaves, J.,	*Oakland*	1
Eberson, F.,	*San Francisco*	22
Ebright, G. E.,	*San Francisco*	22
Eckerle, W. J.,	*Wilmington*	9
Eckhardt, W. W.,	*Los Angeles*	9
Eddy, I. H.,	*Glendale*	9
Edelman, D. W.,	*Los Angeles*	9
Eder, H. L.,	*Santa Barbara*	26
Eder, L. F.,	*Santa Barbara*	26
Edgar, M. S.,	*San Rafael*	10
Edgerton, A. E.,	*San Francisco*	22
Edler, W.,	*Pasadena*	9
Edmonds, F. W.,	*Oakland*	1
Edmundson, J. D.,	*Orland*	38
Edson, P. J.,	*Pasadena*	9
Edward, J. T.,	*Pasadena*	9
Edwards, F. A.,	*Los Angeles*	9
Edwards, H. W.,	*Los Angeles*	9
Edwards, J. C.,	*Berkeley*	1
Edwards, W. M.,	*Portola*	8
Ehlers, E. C.,	*Loma Linda*	20
Ehlers, H.,	*Fowler*	4
Ehrenclou, O. N.,	*San Francisco*	22
Ehrke, A. A.,	*Compton*	9
Eidenmuller, W. C., Jr.,	*San Francisco*	22
Eisen, E. G.,	*Los Angeles*	9
Eiskamp, E. H.,	*Watsonville*	28
Eklund, O. E.,	*San Francisco*	22
Eldredge, W. W.,	*Fontana*	20
Elkins, D. L.,	*Long Beach*	9
Elliot, A. H., Jr.,	*Santa Barbara*	26
Elliott, A. E.,	*San Diego*	21
Elliott, A. L.,	*Berkeley*	1
Elliott, F. P.,	*San Diego*	21
Elliott, H. M.,	*Los Angeles*	9
Ellis, H. O.,	*Chico*	2
Ellis, J. A.,	*Alameda*	1
Ellis, L. T.,	*Los Angeles*	9
Ellis, M.,	*Los Angeles*	9
Ellis, W. L.,	*Boulder Creek*	28
Ellsworth, A. B.,	*Long Beach*	9
Ellwood, P. M.,	*Oakland*	1
Eloesser, L.,	*San Francisco*	22
Elvin, A. G.,	*Vancouver, B. C.*	7
Ely, L. W.,	*San Francisco*	27
Emerson, M. L.,	*Oakland*	1
Emery, C. E.,	*San Francisco*	22
Emery, C. K.,	*Los Angeles*	9
Emery, W. S.,	*Los Angeles*	9
Emge, L. A.,	*San Francisco*	22
Emmons, C. L.,	*Ontario*	20
Empey, L. W.,	*Roseville*	16
Emrick, E. L.,	*Stockton*	23
Ende, F. M.,	*Hollywood*	9
Endres, W. J.,	*Los Angeles*	9
Engle, H. M.,	*San Francisco*	22
English, C. F.,	*Stockton*	23
English, G. G.,	*Hollywood*	9
Enloe, N. T.,	*Chico*	2
Enos, J. B.,	*Oakland*	1
Enos, M. M.,	*Oakland*	1
Epsteen, A.,	*San Francisco*	22
Epstein, N. N.,	*San Francisco*	22
Erickson, H. A.,	*Manila, P. I.*	9
Erkenbeck, J. W.,	*San Diego*	21
Erkenbeck, V. J.,	*San Diego*	21
Erlanger, V. J.,	*San Diego*	21
Ernsberger, G. H.,	*Los Angeles*	9
Ervin, D. M.,	*San Francisco*	22
Eshman, L. A.,	*Los Angeles*	9
Esnard, R. P.,	*Los Angeles*	9
Esslinger, P. H.,	*San Juan Capistrano*	15
Etter, O. R.,	*Oakland*	1
Eusden, R. B.,	*Long Beach*	9
Evans, G. H.,	*San Francisco*	22
Evans, H. R.,	*Los Angeles*	20
Evans, J. H.,	*Highland*	20
Evans, J. G.,	*Los Angeles*	9
Evans, L. M.,	*Pasadena*	9
Evans, N. G.,	*S. Pasadena*	9
Evans, R. D.,	*Santa Barbara*	26
Eveleth, R. H.,	*Roseville*	16
Everingham, S.,	*Oakland*	1
Every, H. N.,	*Novato*	10
Ewens, F.,	*Long Beach*	9
Ewer, E. N.,	*Oakland*	1
Ewer, J. N.,	*Oakland*	1
Ewing, F.,	*Oakland*	1
Exelby, P. B.,	*Los Angeles*	9
Eymundson, K. S.,	*San Francisco*	22
Eytinge, E. J.,	*Redlands*	20

F

Faber, H. K.,	*San Francisco*	22
Facey, F. D.,	*San Fernando*	9
Fagan, R. H.,	*Los Angeles*	9
Fagan, S. F.,	*Los Angeles*	9
Fagerstrom, D. P.,	*San Jose*	27
Fainstein, H. J.,	*Los Angeles*	9
Fairchild, C. H.,	*Woodland*	38
Fairchild, F. R.,	*Woodland*	38
Fairchild, L. H.,	*Carlsbad*	21
Falconer, E. H.,	*San Francisco*	22
Falconer, F. H.,	*Los Angeles*	9
Falk, C. C.,	*Eureka*	5
Falk, C. L.,	*Eureka*	5
Falk, E. V.,	*Modesto*	33
Fallas, R. E.,	*Los Angeles*	9
Fanning, J. L.,	*Sacramento*	18
Fanson, E.,	*Pasadena*	9
Faris, H. S.,	*Riverside*	17
Farman, G. F.,	*Los Angeles*	9
Farmer, J. C.,	*Felton*	28
Farmer, L. E.,	*Folsom City*	18
Farnham, R. M.,	*Glendale*	9
Farnsworth, H. B.,	*Berkeley*	1
Farnsworth, T. K.,	*Los Angeles*	9
Farr, W. H.,	*Salinas*	13
Farrage, J.,	*Santa Ana*	15
Farrell, J. W.,	*Los Angeles*	9
Farrell, L. W.,	*Sacramento*	18
Farrow, E. J.,	*San Diego*	21
Fate, M. W.,	*Los Angeles*	9
Fate, W. A.,	*Los Angeles*	9
Faulkner, E. C.,	*Sacramento*	18
Faulkner, J. L.,	*Red Bluff*	34
Faulkner, W. B., Jr.,	*San Francisco*	22
Fay, F. G.,	*Sacramento*	18

NAME	COUNTY	COUNTY SOCIETY NO.
Fay, G. H.,	*Auburn*	16
Fay, J.,	*San Francisco*	22
Fearn, J. R.,	*Oakland*	1
Fearon, W. M.,	*Los Angeles*	9
Feeley, M. A.,	*San Francisco*	22
Fehliman, W. E.,	*Santa Cruz*	28
Fehrensen, G.,	*Inglewood*	9
Feinberg, H.,	*San Francisco*	22
Felberbaum, W.,	*Santa Paula*	37
Feldman, C.,	*Maywood*	9
Felger, L.,	*Los Angeles*	9
Fellows, A.,	*Los Angeles*	9
Felsenthal, L.,	*Los Angeles*	9
Fenton, W. W.,	*San Bernardino*	20
Ferguson, C. J.,	*Los Angeles*	9
Fernandez, M. L.,	*Pinole*	3
Fernish, C. A.,	*Santa Clara*	27
Ferrante, A. A.,	*San Francisco*	22
Ferrier, P. A.,	*Pasadena*	9
Ferry, F. C.,	*Los Angeles*	15
Fetter, E. M.,	*San Diego*	21
Fibush, A.,	*San Francisco*	22
Fiegel, F. X.,	*San Bernardino*	20
Field, A. M.,	*Patterson*	33
Field, J. W.,	*Alhambra*	9
Fielder, R. L.,	*San Francisco*	22
Fielding, G. A.,	*Brentwood Heights*	9
Fields, D. B.,	*San Francisco*	29
Fields, M.,	*Los Angeles*	9
Fieseler, W. R.,	*Los Angeles*	9
Filipello, E. A.,	*San Jose*	27
Finan, A. P.,	*Suisun*	31
Finch, W. C.,	*Los Angeles*	9
Fine, I. A.,	*Los Angeles*	9
Finkelberg, I. L.,	*San Bernardino*	20
Finnerty, E. J.,	*Sonoma*	32
Finsand, V.,	*San Francisco*	22
Firestone, F.,	*San Francisco*	22
Fischel, K.,	*Los Angeles*	9
Fish, E. S.,	*Los Angeles*	9
Fishbaugh, E. C.,	*Los Angeles*	9
Fisher, A. L.,	*San Francisco*	22
Fisher, C.,	*Los Angeles*	9
Fisher, C. A.,	*Los Angeles*	9
Fisher, R. H.,	*Oakland*	1
Fisher, R. E.,	*Pomona*	9
Fisher, V. L.,	*Long Beach*	9
Fisher, W. L.,	*Pomona*	9
Fist, H. S.,	*Los Angeles*	9
Fitzgerald, J. J.,	*Richmond*	34
Fitzgerald, W. W.,	*Stockton*	23
Fitzgibbon, C. C.,	*Merced Falls*	12
Fitzpatrick, E. B.,	*Martinez*	3
Flagg, D. P.,	*Los Angeles*	9
Flamson, R. J.,	*Los Angeles*	9
Flatley, M.,	*Weimar*	16
Fleissner, C. M.,	*Santa Rosa*	32
Fleming, E. W.,	*Los Angeles*	9
Fleming, H. W.,	*San Francisco*	22
Fleming, L. P.,	*Sanger*	4
Fleming, S.,	*Eureka*	5
Fletcher, C. D.,	*San Francisco*	22
Fletcher, H. A.,	*San Francisco*	22
Fletcher, R.,	*San Francisco*	22
Flewelling, L. M.,	*Glendale*	9
Flitcroft, L. M. L.,	*Sacramento*	18
Floersheim, S.,	*Los Angeles*	9
Flood, R. G.,	*San Francisco*	22
Floreth, O. F.,	*Dixon*	31
Fluhmann, C. F.,	*San Francisco*	22
Foard, F. T.,	*Santa Barbara*	26
Fogg, E. S.,	*Wasco*	7
Folkins, F. H.,	*Redlands*	20
Folte, A. G.,	*San Francisco*	22
Foord, A. G.,	*Pasadena*	9
Foote, C. G.,	*San Diego*	21
Foote, F. S.,	*San Francisco*	22
Forbes, H. J.,	*Pasadena*	9
Ford, H. G.,	*Richmond*	3
Ford, R. A.,	*Los Angeles*	9
Force, L.,	*Oakland*	1
Forline, H.,	*Los Angeles*	9
Forsythe, J. S.,	*San Bernardino*	20
Fortier, R. M.,	*Salinas*	13
Fortson, G. R.,	*Susanville*	8
Foshay, A. W.,	*Oakland*	1
Foster, A. H.,	*Brawley*	6
Foster, C. A.,	*Los Angeles*	9
Foster, E. C.,	*Hanford*	4
Foster, G. A.,	*Sacramento*	18
Foster, H. E.,	*Berkeley*	1
Foster, P. A.,	*Los Angeles*	9
Fountain, E. R.,	*Merced*	12
Fowler, C. B.,	*Oakland*	1
Fowler, D. C.,	*Exeter*	35
Fowler, G. W. J.,	*Santa Clara*	27
Fowler, H. L.,	*Los Angeles*	9
Fox, C. M.,	*San Diego*	21
Fox, D. S.,	*Berkeley*	1
Fox, H. W.,	*Tulare*	35
Fox, L. H.,	*Bakersfield*	7
Fox, W. F.,	*El Centro*	6
Frame, P. W.,	*Elk Grove*	18
Francis, R. T.,	*Oxnard*	37
Francis, R. K.,	*Inglewood*	9
Francis, V. C.,	*Long Beach*	9
Francis, W. V. C.,	*Los Angeles*	9
Frandy, M. F.,	*Oakland*	1
Frankenheimer, J. B.,	*San Francisco*	22
Frankl, J.,	*Los Angeles*	9
Franklin, D. M.,	*Los Angeles*	9
Franklin, J. H.,	*Guadalupe*	26
Franklin, W. S.,	*Santa Barbara*	26
Franklin, W. R.,	*Los Angeles*	9
Frary, B. S.,	*Los Angeles*	9
Frasch, O. R.,	*San Francisco*	22
Fraser, H. E.,	*San Francisco*	22
Fraser, L. H.,	*Richmond*	3
Fraser, M. L.,	*Los Angeles*	9
Fraser, M. W.,	*Woodlake*	35
Frawley, J. M.,	*Fresno*	4
Frederickson, H.,	*Eldridge*	32
Frees, B. M.,	*Los Angeles*	9
Fregeau, A. N.,	*San Francisco*	22
Freidell, H. F.,	*Santa Barbara*	26
French, C. E.,	*San Francisco*	22
French, J. R.,	*Los Angeles*	9
Freudenthal, L.,	*Gridley*	2
Frey, R. G.,	*Red Bluff*	34
Frey, W. C.,	*San Francisco*	22
Freyermuth, O. G.,	*San Francisco*	22
Frick, D. J.,	*Los Angeles*	9
Fricke, A. A.,	*Los Angeles*	9
Friedberger, W.,	*Stockton*	23
Friedman, A.,	*San Francisco*	25
Friedman, J. C.,	*Banning*	17
Friedman, M.,	*Los Angeles*	9
Friesen, H. J.,	*Glendale*	9
Frisch, A.,	*Los Angeles*	9
Fritschen, W.,	*San Francisco*	22
Frizzell, R. R.,	*Pasadena*	9
Froehlich, D. E.,	*Oakland*	1
Frohman, B. S.,	*San Francisco*	22
Frost, E.,	*Stockton*	23
Frost, K. P.,	*Los Angeles*	9
Frug, J.,	*Oakland*	1
Fry, P. B.,	*Benicia*	31
Fuller, R. N.,	*Tulare*	35
Furbush, C. G.,	*Oakland*	1
Furlong, R. M.,	*San Francisco*	22
Furness, G. B.,	*Visalia*	35
Furstman, J. M.,	*Monrovia*	9
Futch, C. E.,	*Los Angeles*	9

G

Gage, A. E.,	*Los Angeles*	9
Gage, A. T.,	*Redlands*	20
Gage, C. E.,	*Los Angeles*	9
Gageby, L. H.,	*Los Angeles*	9
Gagnon, A. L.,	*San Diego*	21
Gailmard, C. R.,	*Los Angeles*	9
Galbraith, A.,	*Oakland*	1
Galbraith, F. B.,	*Alameda*	1
Galbraith, G. H.,	*Long Beach*	9
Gale, W. V.,	*Los Angeles*	9
Gallant, A. E.,	*Los Angeles*	9
Gallant, P. A.,	*Huntington Park*	9
Gallegos, P. B.,	*Stockton*	23
Galligan, C. A., Jr.,	*Monterey*	13
Galloway, C. E.,	*Hollywood*	9
Gallup, H. A.,	*San Luis Obispo*	24
Gallwey, J.,	*San Francisco*	22
Gamette, D. L.,	*Los Angeles*	9
Gans, C. H.,	*Long Beach*	9
Garcelon, H.,	*San Bernardino*	20
Garcia, L. C.,	*San Francisco*	22
Gardner, C. S.,	*Oakland*	1
Gardner, F. W.,	*Loma Linda*	20
Gardner, F. M.,	*San Bernardino*	20
Gardner, H. L.,	*San Francisco*	22
Gardner, K. D.,	*San Francisco*	22
Gardner, W. E.,	*Riverside*	17
Gardner, W. M.,	*Los Angeles*	9
Garfinkle, F. E.,	*San Francisco*	22
Garland, L. H.,	*San Francisco*	22
Garner, G. W.,	*Taft*	7
Garnett, A. S.,	*San Bernardino*	20
Garrett, F. H.,	*Patton*	20
Garrison, B. E.,	*Riverside*	17
Garrison, O. H.,	*Oakland*	1
Garrison, W. P.,	*Long Beach*	9
Garstang, D. B.,	*Los Angeles*	9
Garth, W. L.,	*La Jolla*	21
Gaspard, F. J.,	*Los Angeles*	9
Gassman, F.,	*Los Angeles*	9
Gasteiger, E. S.,	*Los Angeles*	9
Gates, C. Y.,	*San Francisco*	22
Gates, M. G.,	*Ocean Park*	9
Gates, M. J.,	*Santa Cruz*	28
Gatliff, W. W.,	*Butte City*	38
Gattuccio, B.,	*San Jose*	27
Gaulden, C. L.,	*Los Angeles*	9
Gauthier, A. E.,	*San Francisco*	22
Gay, H. M.,	*Pasadena*	9
Gaynor, J. J.,	*Davenport*	28
Geddes, M. A.,	*Carlotta*	5
Gehrels, E.,	*San Francisco*	22
Gehrels, F.,	*San Mateo*	25
Geiger, J. C.,	*San Francisco*	22
Geisler, W. H.,	*San Jose*	27
Geistweit, W. H., Jr.,	*San Diego*	21
Geith, C. R.,	*Riverside*	17
Gelston, C. F.,	*San Francisco*	22
Genochio, E. P.,	*San Francisco*	22
Gentry, H. G.,	*Redlands*	20
George, A. R.,	*Loma Linda*	20
George, J. D.,	*Los Angeles*	9
George, J. M.,	*San Francisco*	22
George, L. H.,	*Loma Linda*	20
George, W. A.,	*Loma Linda*	20
Gerisch, H. H.,	*Los Angeles*	9
Gerlach, F. C.,	*San Jose*	27
Gerlough, R. J.,	*Menlo Park*	25
Germann, A. C.,	*Los Angeles*	9
Gernand, H. C.,	*Los Angeles*	9
Gerrard, C. C.,	*Redding*	29
Gerstle, M., Jr.,	*San Francisco*	22
Gewertz, L. L.,	*Los Angeles*	9
Geyman, M. J.,	*Santa Barbara*	26
Ghrist, D. G.,	*Los Angeles*	9
Ghrist, D. M.,	*Glendale*	9
Ghrist, O. E.,	*Glendale*	9
Giannini, A. H.,	*Los Angeles*	22
Gibbons, H., III,	*San Francisco*	22
Gibbons, H. W.,	*Sacramento*	18
Gibbons, M. R.,	*San Francisco*	22
Gibbons, M. R., Jr.,	*San Francisco*	22
Gibbs, D. H.,	*Los Angeles*	9
Gibbs, R. S.,	*San Bernardino*	20
Gibbs, W. M.,	*Glendale*	9
Gibson, A. C.,	*San Francisco*	22
Gibson, T. E.,	*San Francisco*	22
Gidley, D. S.,	*Ontario*	20
Gidoll, S. H.,	*San Francisco*	22
Gifford, M. A.,	*San Francisco*	22
Gilbert, B. H.,	*Porterville*	35
Gilbert, J. S.,	*Los Angeles*	9
Gilbert, Q. O.,	*Oakland*	1
Gilbert, R.,	*San Francisco*	22
Gilbert, W. H.,	*Los Angeles*	9
Gilcreest, E. L.,	*San Francisco*	22
Giles, F. E.,	*Los Angeles*	9
Gilfillan, H. M.,	*San Francisco*	22
Gilkey, W. D.,	*Long Beach*	9
Gillespie, S. T.,	*La Jolla*	21
Gilliatt, W. H.,	*Coalinga*	4
Gillihan, A. F.,	*San Luis Obispo*	24
Gilliland, M. L.,	*Los Angeles*	9
Gilliland, R. C.,	*Callao, Peru*	9
Gillis, J. P.,	*Los Angeles*	9
Gillis, J. D.,	*Los Angeles*	9
Gilman, P. K.,	*San Francisco*	22
Ginsburg, H. M.,	*Fresno*	4
Ginsburg, S. S.,	*Visalia*	35
Giovinco, J. B.,	*San Francisco*	22
Girard, F. R.,	*San Francisco*	22
Girdleston, C. W.,	*Riverside*	17
Glascock, F. L.,	*Los Angeles*	9
Glaser, E. F.,	*San Francisco*	22
Glaser, M. A.,	*Los Angeles*	9
Glass, K. W.,	*Alhambra*	9
Glass, S. J.,	*Los Angeles*	9
Glassman, S. C.,	*Los Angeles*	9
Gleason, A. L.,	*Oakland*	1
Gleeten, S. D.,	*Monrovia*	9
Glenn, R. A.,	*Oakland*	1
Glenn, T. H.,	*Los Angeles*	9
Glidden, R. Y.,	*Los Angeles*	9
Gllebe, P. A.,	*San Francisco*	22
Glyer, R. T.,	*Mountain View*	27
Gobar, F. H.,	*Fullerton*	15
Gocher, T. E. P.,	*San Francisco*	22
Goddard, W. P.,	*Mill Valley*	10
Godfrey, E. B.,	*San Bernardino*	20
Godshall, L. D.,	*Los Angeles*	9
Godwin, D. E.,	*Long Beach*	9
Goeckerman, A. H.,	*Los Angeles*	9
Goin, L. S.,	*Los Angeles*	9
Goldberg, A. T.,	*Fresno*	4
Goldberg, M. B.,	*San Francisco*	22
Goldberg, P. H.,	*Los Angeles*	9
Goldberg, S. S.,	*Los Angeles*	9
Golden, J. H.,	*San Francisco*	22
Golding, D. G.,	*Santa Monica*	9
Goldman, S. A.,	*San Francisco*	22
Goldman, V. S.,	*San Francisco*	22
Goldman, T. H.,	*Los Angeles*	9
Goldstein, J.,	*Los Angeles*	9
Goldwasser, M.,	*Los Angeles*	9
Golitzin, A. V.,	*Los Angeles*	9
Gomes, J. J.,	*Oakland*	1
Gompertz, K. R.,	*Berkeley*	1
Gonzales, F. L. A.,	*San Francisco*	22
Goodall, O. P.,	*Bakersfield*	7
Goodman, M.,	*Stockton*	23
Goodwin, M.,	*Los Angeles*	9
Gordon, F. H.,	*Los Angeles*	9
Gordon, G. O.,	*Long Beach*	9
Gordon, K. W.,	*Los Angeles*	9
Gorham, C. B.,	*Monterey*	13
Gosney, C. W.,	*Hollywood*	9

NAME	COUNTY	COUNTY SOCIETY NO.
Gossard, J. E.,	*Sierra Madre*	9
Gottlieb, A.,	*Los Angeles*	9
Gottschalk, A.,	*San Francisco*	22
Gough, A. S.,	*El Segundo*	9
Gold, N. B.,	*Modesto*	33
Gourley, I.,	*Livermore*	1
Gowan, C. H.,	*Glendale*	9
Graeser, H. B.,	*Holtville*	6
Graham, H. B.,	*San Francisco*	22
Graham, H. K.,	*San Diego*	21
Graham, J. A.,	*Barstow*	20
Graham, J. P.,	*Los Angeles*	9
Graham, L.,	*Newberry*	20
Graham, R. S.,	*Sacramento*	18
Graham, R. E.,	*Oakland*	1
Grandstaff, F. L.,	*Preble, Ind.*	26
Granger, A. S.,	*Los Angeles*	9
Grant, B. E., Jr.,	*Glendale*	9
Grant, J. F.,	*San Diego*	21
Grant, R. F.,	*San Francisco*	22
Gratiot, W. M.,	*Monterey*	13
Grau, E. C.,	*Niles*	1
Graun, R. E.,	*Los Gatos*	27
Graves, J. H.,	*San Francisco*	22
Graves, J. M.,	*San Francisco*	22
Graves, R. V.,	*Fullerton*	15
Gray, A. E.,	*Marysville*	39
Gray, E. H.,	*Woodland*	25
Gray, E.,	*Los Angeles*	9
Gray, E. E.,	*Marysville*	39
Gray, F. P.,	*San Francisco*	22
Gray, G. A.,	*San Jose*	27
Gray, G. H.,	*Oakland*	1
Gray, H.,	*San Francisco*	22
Gray, J. P.,	*San Francisco*	22
Gray, J. R.,	*Carmel*	13
Gray, P. A., Jr.,	*Santa Barbara*	26
Gray, R. N.,	*Hartford, Conn.*	22
Gray, R. M.,	*Indio*	17
Green, A. S.,	*San Francisco*	22
Green, B., Jr.,	*Riverside*	17
Green, D. M.,	*Los Angeles*	9
Green, H. R.,	*Palo Alto*	27
Green, J.,	*Los Angeles*	9
Green, J. W.,	*Vallejo*	31
Green, L. D.,	*San Francisco*	22
Green, M. I.,	*San Francisco*	22
Green, R. C.,	*Fullerton*	15
Greenbaum, G. B.,	*Los Angeles*	9
Greenbaum, L. H.,	*Los Angeles*	9
Greengo, C. G.,	*Los Angeles*	9
Greenway, H. H.,	*Los Angeles*	9
Greenwood, C. F.,	*Oakland*	1
Greenwood, E. N.,	*San Francisco*	22
Greer, E. D.,	*Oakland*	1
Gregg, F. C.,	*Calexico*	6
Gregg, H. J.,	*Calexico*	6
Gregory, C. A.,	*Sanitarium*	14
Gregory, F. S.,	*Redwood City*	25
Gregory, H. L.,	*Stockton*	23
Gregory, L. C.,	*Pittsburg*	3
Gregory, W. A.,	*Oakland*	1
Grey, C. A.,	*Burbank*	9
Grieg, T. O.,	*Berkeley*	1
Griffin, C. F.,	*San Francisco*	22
Griffith, A. H.,	*Oakland*	1
Grimmer, E. M.,	*Irvington*	1
Griner, E. C.,	*Stockton*	23
Grishaw, W. H.,	*Los Angeles*	9
Grodsky, L. I.,	*San Francisco*	22
Groesbeck, M. J.,	*Porterville*	35
Groff, S. H.,	*Ojai*	37
Grogan, R. E.,	*Los Angeles*	9
Gross, H. G.	*Eureka*	5
Grosse, A. B.,	*San Francisco*	22
Gruber, F. G.,	*Santa Monica*	9
Grundy, G. M.,	*Newport Beach*	15
Guardino, S. J.,	*San Francisco*	22
Guedel, A. E.,	*Beverly Hills*	9
Guernsey, P. F.,	*Los Angeles*	9
Guerra, A. L.,	*Alameda*	1
Guidinger, W. E.,	*San Pedro*	9
Guido, F. R.,	*Visalia*	35
Guilfoil, J. A.,	*San Francisco*	22
Guinan, E. R.,	*Richmond*	3
Gumbiner, A. A.,	*Los Angeles*	9
Gummess, K. C.,	*Los Angeles*	9
Gummig, E. A.,	*Pasadena*	9
Gunderson, H. J.,	*Los Angeles*	9
Gundrum, F. F.,	*Sacramento*	18
Gundrum, L. K.,	*Los Angeles*	9
Gundrum, W. H.,	*Owensmouth*	9
Gundry, F. J.,	*Bakersfield*	7
Gunn, F. G.,	*Kelseyville*	14
Gunn, H.,	*San Francisco*	22
Gunther, L.,	*Los Angeles*	9
Gustafson, A. W.,	*Gustine*	12
Gustafson, R. K.,	*Pasadena*	9

H

Haas, S. L.,	*San Francisco*	22
Haber, W. J.,	*San Francisco*	22
Hablutzel, C. E.,	*San Jose*	27
Hadden, D.,	*Oakland*	1
Hadley, C. M.,	*Redlands*	20
Hadley, H. G.,	*Los Angeles*	9
Haenszel, A. L.,	*San Bernardino*	20
Hagan, B. J.,	*San Francisco*	22
Hagan, R.,	*Los Angeles*	9
Hagar, F. C.,	*Los Angeles*	9
Hagedorn, E. F.,	*Modesto*	33
Hagen, H.,	*San Luis Obispo*	24
Hager, B. H.,	*Los Angeles*	9
Hagerty, T. W.,	*Spadra*	23
Hahn, L. W.,	*Berkeley*	1
Haig, T. R.,	*Sacramento*	18
Haight, F. K.,	*Oakland*	1
Haight, L. M.,	*Stockton*	23
Halburg, C. T.,	*Burbank*	9
Haldeman, K. O.,	*San Francisco*	22
Hale, C. W.,	*Pomona*	9
Hale, N. G.,	*Sacramento*	18
Haley, P. S.,	*San Jose*	27
Hall, C.,	*Oakland*	1
Hall, C. C.,	*Oakland*	1
Hall, C.,	*Beverly Hills*	9
Hall, E. H.,	*Vernon*	9
Hall, E. M.,	*Los Angeles*	9
Hall, G. E.,	*Palo Alto*	27
Hall, G. J.,	*Sacramento*	18
Hall, G. P.,	*San Jose*	27
Hall, G. S.,	*Los Angeles*	9
Hall, J. H.,	*Sacramento*	18
Hall, R. C.,	*San Diego*	21
Halley, E. C.,	*Sanger*	4
Halloran, C. R.,	*Los Angeles*	9
Hambleton, H. G.,	*Los Angeles*	9
Hambleton, M. P.,	*Fontana*	20
Hamer, C.,	*Glendale*	9
Hamilton, G. Van T.,	*Santa Barbara*	26
Hamilton, J. K., Jr.,	*Alameda*	1
Hamilton, J. R.,	*Los Angeles*	9
Hamilton, R. L.,	*Marysville*	39
Hamilton, P. L.,	*Chico*	2
Hamlin, O. D.,	*Oakland*	1
Hamlin, R. E.,	*Santa Rosa*	32
Hammack, R. W.,	*Los Angeles*	9
Hammond, N. E.,	*Los Angeles*	9
Hand, F. B.,	*San Francisco*	22
Hand, L. J.,	*San Francisco*	22
Hanford, F. W.,	*Los Angeles*	9
Hanley, B. J.,	*Los Angeles*	9
Hanlon, E. R.,	*Los Angeles*	9
Hanlon, E. W.,	*San Francisco*	22
Hanlon, H. H.,	*Los Angeles*	9
Hanner, J. W.,	*Burlingame*	25
Hansen, A. M.,	*Los Angeles*	9
Hansen, O. J.,	*Redding*	29
Hanson, S.,	*Stockton*	23
Hanze, H. G.,	*Solvang*	26
Hanzlik, P. J.,	*San Francisco*	25
Happ, W. M.,	*Los Angeles*	9
Hara, H. J.,	*Los Angeles*	9
Hara, M. F.,	*Los Angeles*	9
Harada, M. A.,	*San Francisco*	22
Harbaugh, O. S.,	*San Diego*	21
Harbaugh, R. W.,	*San Francisco*	22
Harbeck, C. J.,	*Los Angeles*	9
Harbert, E.,	*Stockton*	23
Hardeman, V. V.,	*San Francisco*	22
Harder, W. R.,	*Los Gatos*	8
Hardgrave, L. E.,	*San Francisco*	22
Harding, G. F.,	*Santa Monica*	9
Harding, H. W.,	*Oakland*	1
Harding, L. W.,	*Los Angeles*	9
Harding, M. C.,	*San Diego*	21
Harding-Mason, J.,	*San Francisco*	22
Hardy, B. W.,	*Huntington Beach*	15
Hare, G. A.,	*Fresno*	4
Hare, H. P.,	*Los Angeles*	9
Hare, R. A.,	*Santa Barbara*	26
Harmon, E. D.,	*San Francisco*	22
Harmon, R. J. P.,	*Richmond*	3
Harner, C. E.,	*Long Beach*	9
Harner, H. R.,	*Los Angeles*	9
Harrington, J. T.,	*Santa Cruz*	28
Harr, R. V.,	*Eldridge*	32
Harris, E. L.,	*Oakland*	1
Harris, F. I.,	*San Francisco*	22
Harris, H. I.,	*Los Angeles*	9
Harris, H.,	*San Francisco*	22
Harris, J. M.,	*Los Angeles*	9
Harris, J. B.,	*Sacramento*	18
Harris, M. W.,	*Novato*	10
Harris, R. H.,	*Los Angeles*	9
Harrison, E. S.,	*Gridley*	2
Harrison, E.,	*Los Angeles*	9
Harrison, F.,	*Gridley*	2
Harrison, W. H.,	*San Francisco*	22
Harrison, W. J.,	*Alhambra*	9
Harrop, L. L.,	*Los Angeles*	9
Hart, A. C.,	*Sacramento*	18
Hart, C. D.,	*San Francisco*	22
Hart, F. R.,	*Pacific Grove*	13
Hart, M. E.,	*San Francisco*	25
Hart, R. C.,	*Yreka*	30
Hart, T. M.,	*Los Angeles*	9
Hart, V. W.,	*Yreka*	30
Hart, W. E.,	*Yreka*	30
Harter, T. H.,	*Pasadena*	9
Hartman, G. J.,	*Pasadena*	9
Hartman, G. W.,	*San Francisco*	22
Hartman, H.,	*Modesto*	33
Hartman, W. W.,	*Los Angeles*	9
Hartwell, R. W.,	*Beaumont*	17
Hartwig, L. G.,	*Los Angeles*	9
Harvey, J. E.,	*Pasadena*	9
Harvey, R. W.,	*San Francisco*	22
Harvey, R. J.,	*Anaheim*	15
Harwood, D. A.,	*Santa Ana*	15
Hashiba, G. K.,	*Fresno*	4
Haskell, H. A.,	*Windsor*	32
Hastings, H.,	*Los Angeles*	9
Hastings, S. W.,	*Monterey*	13
Hatch, W. G.,	*Santa Cruz*	28
Hatfield, H. L.,	*Pasadena*	9
Hattery, H. H.,	*Los Angeles*	9
Haven, M. N.,	*San Francisco*	22
Hawes, R. E.,	*Huntington Beach*	15
Hawk, C. L.,	*Hollywood*	9
Hawkins, C. L.,	*Taft*	7
Hawkins, G. A.,	*Reedley*	4
Hawkins, G. G.,	*Madera*	4
Hawkins, H. M.,	*Los Angeles*	7
Hawkins, J. O.,	*San Rafael*	10
Hawkins, L. P.,	*Los Angeles*	9
Hawley, M. C.	*Agnew*	27
Haworth, M. W.,	*Sacramento*	18
Haworth, W. L.,	*Los Angeles*	9
Hay, E. O.,	*Los Angeles*	9
Hayden, C. T.,	*San Francisco*	22
Hayes, C. M.,	*Los Angeles*	9
Hayes, E. W.,	*Monrovia*	9
Haygood, A. G.,	*Downey*	9
Hayhurst, D. E.,	*Ontario*	20
Haynes, F. W.,	*Los Angeles*	9
Haynes, J. R.,	*Los Angeles*	9
Hayton, C. H.,	*Los Angeles*	9
Hazel, J. K.,	*San Francisco*	22
Hazeltine, M. E.,	*San Francisco*	22
Heald, A. H.,	*San Francisco*	22
Heald, E. S.,	*Berkeley*	1
Hebert, A. W.,	*San Francisco*	22
Hector, L. L.,	*Berkeley*	1
Hedberg, C. C.,	*San Francisco*	22
Heddens, V. O.,	*Pasadena*	9
Hedges, L. A.,	*Richmond*	3
Heffelfinger, M. A.,	*Los Angeles*	9
Heiges, L. E.,	*Lompoc*	26
Heimlich, A. F.,	*Redondo Beach*	9
Hein, G. E.,	*San Francisco*	22
Heinatz, M. A.,	*Oakland*	1
Heinzman, W. H.,	*San Francisco*	22
Heissig, I.,	*Los Angeles*	9
Heitger, J. D.,	*Pasadena*	9
Heisley, G. F.,	*San Francisco*	22
Helstrom, G. L.,	*Fontana*	20
Hely, L. St. J.,	*Richmond*	3
Hench, J. M.,	*Stockton*	23
Henderson, A. N.,	*Sacramento*	18
Henderson, H. E.,	*Santa Barbara*	26
Henderson, H. G.,	*San Francisco*	22
Henderson, J. G.,	*San Francisco*	22
Henderson, R. G.,	*Long Beach*	9
Hendricks, F. R.,	*Ventura*	37
Henke, G. B.,	*Ontario*	20
Hennemuth, J. L.,	*Modesto*	33
Henning, B. H.,	*San Francisco*	22
Henninger, L. L. R.,	*Pasadena*	9
Henrich, A. G.,	*Los Angeles*	9
Henry, A. W.,	*San Leandro*	1
Henry, M. G.,	*Los Angeles*	9
Hensel, G. C.,	*San Francisco*	22
Hepplewhite, J. G.,	*Chico*	2
Heppner, G. J.,	*San Francisco*	22
Herman, B. S.,	*San Francisco*	22
Heron, I. C.,	*San Francisco*	22
Herrick, A. B., Jr.,	*Santa Rosa*	32
Herrick, F. L.,	*Livermore*	1
Herscher, H. L.,	*Los Angeles*	9
Hershman, F.,	*Los Angeles*	9
Hertzog, F. C.,	*Long Beach*	9
Herzikoff, S. S.,	*Los Angeles*	9
Herzog, G. K.,	*San Francisco*	22
Hess, H. A.,	*San Francisco*	22
Hessel, V. E.,	*Los Angeles*	9
Hethcock, E. E.,	*Los Angeles*	9
Heuler, Leo,	*Fellows*	7
Heuschele, W. H.,	*San Jose*	27
Heylmun, H. H.,	*Long Beach*	9
Hiatt, R. S.,	*Modesto*	33
Hibben, J. S.,	*Pasadena*	9
Hicks, A. M.,	*San Francisco*	22
Hicks, J. R.,	*Tulare*	35
Hieronymus, A.,	*Oakland*	1
Higbee, D. R.,	*San Diego*	21
Higgs, D. W. P.,	*Chula Vista*	21
Higgins, C. P.,	*Oakland*	1
Higgins, I. W.,	*Live Oak*	39
Hildreth, H. L.,	*Julian*	21

NAME	COUNTY	COUNTY SOCIETY NO.
Hileman, J. E.,	*San Diego*	21
Hilgesen, J.,	*Oakland*	1
Hill, A. L.,	*Los Angeles*	9
Hill, E. W.,	*San Andreas*	23
Hill, E. J.,	*Eureka*	5
Hill, H. P.,	*San Francisco*	22
Hill, H. G.,	*Redlands*	20
Hill, J. C.,	*Brawley*	6
Hill, L. R.,	*Long Beach*	9
Hill, M. R.,	*Los Angeles*	9
Hill, R. C.,	*Exeter*	35
Hill, R. B.,	*Los Angeles*	9
Hill, T. P.,	*Lakeport*	11
Hill, W. B.,	*Long Beach*	9
Hiller, A. W.,	*Long Beach*	9
Hilliard, C. G.,	*Redlands*	20
Hills, C. B.,	*Berkeley*	1
Hillyard, L. V.,	*Los Angeles*	9
Hillyer, L.,	*Los Banos*	12
Hilton, J. J.,	*Los Angeles*	9
Hinman, F.,	*San Francisco*	22
Hippach, R. M.,	*Los Angeles*	9
Hirshfeld, S.,	*Los Angeles*	9
Hiscox, E. J.,	*Loma Linda*	20
Hitchcock, H. H.,	*Oakland*	1
Hixson, W. C., Jr.,	*Beverly Hills*	9
Hoag, C. L.,	*San Francisco*	22
Hoag, H. J.,	*San Jose*	27
Hoagland, H.,	*Pasadena*	9
Hobdy, W. C.,	*San Francisco*	22
Hodgdon, F. W., Jr.,	*Pasadena*	9
Hodges, W. A.,	*La Vina*	9
Hodgins, F. W.,	*Oakland*	1
Hodgkin, P.,	*El Centro*	6
Hoffman, A. M.,	*Los Angeles*	9
Hoffman, H. V.,	*San Francisco*	22
Hoffman, L. H.,	*San Francisco*	22
Hoffman, P.,	*Marysville*	39
Hoffman, R. O.,	*San Diego*	21
Hogg, R. L.,	*Saratoga*	27
Hogue, W. J.,	*Huntington Park*	9
Hohl, E. M.,	*Los Angeles*	9
Hoke, P. I.,	*Los Angeles*	9
Holcomb, W. F.,	*Oakland*	1
Holder, H. G.,	*San Diego*	21
Holeman, G. S.,	*Centerville*	1
Holladay, F. S.,	*Los Angeles*	9
Holleran, J. F.,	*Los Angeles*	9
Holleran, G. C.,	*Browley*	6
Holleran, W. M.,	*Los Angeles*	9
Holley, W. W.,	*Inglewood*	9
Holliger, C. D.,	*Stockton*	23
Hollingsworth, L. D.,	*Los Angeles*	9
Hollingsworth, M. W.,	*Santa Ana*	15
Holm, E.,	*Eureka*	5
Holman, E. F.,	*San Francisco*	22
Holman, W. F.,	*Los Angeles*	9
Holmer, V. C.,	*San Francisco*	22
Holmes, O. M.,	*San Mateo*	25
Holmes, T. B.,	*E. Oakland*	1
Holmson, H.,	*Anaheim*	15
Holt, R. A., Jr.,	*Los Angeles*	9
Holzman, A. J.,	*Santa Barbara*	26
Holzman, R. R.,	*Los Angeles*	9
Homback, F. J.,	*Santa Barbara*	26
Homer, R. W.,	*Ventura*	27
Homman, G. L.,	*Los Angeles*	9
Homme, O. H.,	*Los Angeles*	9
Hoobler, H. R.,	*Oakland*	1
Hooker, M. O.,	*Santa Barbara*	26
Hoover, E. F.,	*San Diego*	21
Hoover, J. N.,	*Long Beach*	9
Hope, R. B.,	*Los Angeles*	9
Hopkins, E. K.,	*San Francisco*	22
Hopkins, H. H.,	*Fresno*	4
Hopkins, J. W.,	*Glendale*	9
Hopkins, M. F.,	*San Jose*	27
Hopkins, M. A.,	*Sacramento*	18
Hopkirk, C. C.,	*Santa Monica*	9
Horn, C. E.,	*San Francisco*	22
Horner, C. D.,	*San Francisco*	22
Horner, W. D.,	*San Francisco*	22
Horst, W. W.,	*Wilmington*	9
Horton, F. L.,	*Pomona*	9
Hosford, G. N.,	*San Francisco*	22
Hoskins, G.,	*Long Beach*	9
Hosmer, C. M.,	*San Diego*	21
Hosmer, M. N.,	*San Francisco*	22
Houck, G. H.,	*Los Angeles*	9
Hough, R. C.,	*San Diego*	21
Houghton, A. D.,	*San Fernando*	9
Houloose, J.,	*Long Beach*	9
House, L. C.,	*El Centro*	6
Houseworth, A. L.,	*Los Angeles*	9
Housman, N. S.,	*San Francisco*	22
Houston, A. J.,	*San Francisco*	22
Houzvicka, O. A.,	*San Diego*	21
Hovde, A. G.,	*Los Angeles*	9
Howard, B. F.,	*Sacramento*	18
Howard, C. E.,	*San Diego*	21
Howard, G. R.,	*Bell*	9
Howe, R. D.,	*Redwood City*	38
Howell, A. J.,	*Berkeley*	1
Howitt, H. O.,	*San Rafael*	10
Howson, C. R.,	*Los Angeles*	9
Hoyt, H. S.,	*Pacific Grove*	13
Hoyt, W. F.,	*Berkeley*	1
Hromadka, A. B.,	*Santa Monica*	9
Hubbard, C. D.,	*Huntington Park*	9
Hubble, J. E.,	*Pomona*	9
Hubert, C. I.,	*Los Angeles*	9
Huff, G. D.,	*San Diego*	21
Huff, L. J.,	*Los Angeles*	9
Huffman, H. G.,	*Santa Ana*	15
Huffman, L. D.,	*Los Angeles*	9
Huggins, W. L.,	*Los Angeles*	9
Hughes, J. E.,	*Vallejo*	31
Hull, E. H.,	*San Bernardino*	20
Hull, J. P.,	*Stockton*	23
Hull, J. F.,	*Alhambra*	9
Hull, L. C.,	*Hollister*	19
Hull, R. L.,	*Hollister*	19
Humber, J. D.,	*San Francisco*	22
Hummel, E. M.,	*Talmage*	11
Humphrey, W. H.,	*Oakland*	1
Humphreys, J. M.,	*Sanger*	4
Hund, H. O.,	*San Rafael*	10
Hunnicutt, L. G.,	*Pasadena*	9
Hunsberger, H. S.,	*San Francisco*	22
Hunt, R. A.,	*Riverdale*	4
Hunt, V. C.,	*Los Angeles*	9
Hunt, W. A.,	*Fresno*	4
Hunt, W. R.,	*Santa Barbara*	26
Hunter, G. G.,	*Los Angeles*	9
Hunter, P. M.,	*Pebble Beach*	13
Hunter, T. V.,	*Hollywood*	9
Hunter, W. E.,	*South Gate*	9
Hunter, W. E.,	*Los Angeles*	9
Huntington, H. A.,	*Los Angeles*	9
Hurwitt, S. J.,	*San Francisco*	22
Hurwitz, S. H.,	*San Francisco*	22
Husband, R. D.,	*Modesto*	33
Huston, J. M.,	*Burlingame*	25
Hutchings, R. K.,	*San Francisco*	22
Hutchinson, W. W.,	*Los Angeles*	9
Hutchison, C. W.,	*Los Angeles*	9
Hutton, J. H.,	*Calipatria*	6
Hyde, R. D.,	*Beverly Hills*	9
Hyland, C. M.,	*Los Angeles*	9
Hyman, S.,	*San Francisco*	22

I

Ianne, C. L.,	*San Jose*	27
Iki, G. S.,	*Sacramento*	18
Illick, C. R.,	*Santa Paula*	37
Illsley, M. L.,	*Claremont*	9
Imerman, C. P.,	*Hollywood*	9
Imerman, S. W.,	*Hollywood*	9
Ingalls, A. T.,	*Los Angeles*	9
Ingber, I. S.,	*San Francisco*	22
Ingham, S. D.,	*Los Angeles*	9
Ingram, C. H.,	*Fresno*	4
Inman, M. M.,	*Los Angeles*	9
Inman, T. G.,	*San Francisco*	22
Innis, E. C.,	*Los Angeles*	9
Irish, C. W.,	*Pasadena*	9
Irones, R. B.,	*San Diego*	21
Irvine, A. R.,	*Los Angeles*	9
Irvine, R. S.,	*San Francisco*	22
Irwin, J. C.,	*Los Angeles*	9
Irwin, S. V.,	*Oakland*	1
Irwin, W. H.,	*Oakland*	1
Isaac, J. P.,	*Glendale*	9
Ishikawa, E.,	*Stockton*	23
Isnardi, M.,	*San Francisco*	22
Isoard, M. C.,	*Sacramento*	18
Ito, P. K.,	*Los Angeles*	9
Ivey, E. D.,	*Oakland*	1

J

Jackson, C. R.,	*Costa Mesa*	15
Jackson, E. A.,	*Atwater*	12
Jackson, F. F.,	*Oakland*	1
Jackson, J. E.,	*Los Angeles*	9
Jackson, J. A.,	*Pasadena*	9
Jackson, L. H.,	*W. Los Angeles*	9
Jacobs, A. M.,	*San Francisco*	22
Jacobs, F. E.,	*San Diego*	21
Jacobs, J.,	*San Francisco*	22
Jacobs, J.,	*Hollywood*	9
Jacobs, L. C.,	*San Francisco*	22
Jacobs, S. N.,	*San Francisco*	22
Jacobs, W. R.,	*Stockton*	9
Jacobson, H. P.,	*Los Angeles*	9
Jacobson, H. A.,	*Fresno*	4
Jacobson, P. N.,	*Oakland*	1
Jacobus, L. R.,	*Oakland*	1
James, C. A.,	*Fresno*	4
James, C. S.,	*Los Angeles*	9
James, R. J.,	*Los Angeles*	9
James, V. M.,	*Glendale*	9
Janes, O. W.,	*Glendale*	9
Jardini, A.,	*Los Angeles*	9
Jayet, A. C. A.,	*Santa Cruz*	28
Jean, G. W.,	*Santa Barbara*	26
Jeancon, E. C.,	*Los Angeles*	9
Jeffry, D. E.,	*Oakland*	1
Jeffs, M. D. W.,	*Los Angeles*	9
Jelinek, J. J.,	*Los Angeles*	9
Jellinek, E. O.,	*San Francisco*	22
Jelte, S. A.,	*Oakland*	1
Jenkins, B. E.,	*Oakland*	1
Jenkins, H. L.,	*Arcata*	5
Jenkins, R. B.,	*Los Angeles*	9
Jenney, W. C.,	*Vacaville*	31
Jennings, G. D.,	*Covina*	9
Jennison, J. E.,	*San Diego*	21
Jensen, J. P.,	*Sonora*	36
Jensen, O. B.,	*Livermore*	1
Jesberg, S.,	*Los Angeles*	9
Jewel, R. T.,	*Los Angeles*	9
Jewett, R. A.,	*Los Angeles*	9
Jimerson, J. R.,	*Long Beach*	9
Johannes, J. C.,	*Santa Cruz*	28
Johansen, E. A.,	*San Francisco*	22
Johansen, V. E.,	*Berkeley*	32
Johnson, A. L.,	*Taft*	7
Johnson, C.,	*Los Angeles*	9
Johnson, C. A.,	*Napa*	14
Johnson, C. G.,	*Long Beach*	9
Johnson, C. F.,	*Oakland*	1
Johnson, C. A.,	*Los Angeles*	9
Johnson, C. E.,	*Long Beach*	9
Johnson, C. M.,	*San Francisco*	22
Johnson, C. R.,	*Whittier*	9
Johnson, D. D.,	*Grass Valley*	16
Johnson, E. E.,	*Palo Alto*	27
Johnson, E. H.,	*Los Angeles*	9
Johnson, E. D. L.,	*Alhambra*	9
Johnson, G. M.,	*Los Angeles*	9
Johnson, H. A.,	*Glendale*	9
Johnson, H. R.,	*Sacramento*	18
Johnson, H. H.,	*San Francisco*	22
Johnson, L. R.,	*Los Gatos*	23
Johnson, M.,	*Los Angeles*	9
Johnson, M. L.,	*Oakland*	1
Johnson, O. D.,	*Los Angeles*	9
Johnson, O. F.,	*Sacramento*	18
Johnson, R. H.,	*Los Angeles*	9
Johnson, W. C.,	*Pomona*	9
Johnson, W. B.,	*Chico*	2
Johnson, W. C.,	*Fellows*	7
Johnson, W. E.,	*Santa Barbara*	26
Johnston, E. J.,	*South Pasadena*	9
Johnston, F. R.,	*Oakland*	1
Johnston, H. A.,	*Anaheim*	15
Johnston, J.,	*Los Angeles*	9
Johnston, S. T.,	*Santa Ana*	15
Johnston, W. H.,	*Santa Barbara*	26
Johnstone, E. M.,	*Pasadena*	9
Johnstone, G. A.,	*Glendale*	9
Johnstone, W. A.,	*Hanford*	35
Jones, C. B.,	*Sacramento*	18
Jones, C. P.,	*Grass Valley*	16
Jones, C. R.,	*San Diego*	21
Jones, C. W.,	*Hollywood*	9
Jones, E. F.,	*Oakland*	1
Jones, E. W.,	*Los Angeles*	9
Jones, G. W.,	*Los Angeles*	9
Jones, G. F.,	*San Francisco*	22
Jones, H. W.,	*San Luis Obispo*	33
Jones, H. L.,	*Los Angeles*	9
Jones, H. T.,	*Los Angeles*	9
Jones, I. H.,	*Los Angeles*	9
Jones, I. W.,	*Los Angeles*	9
Jones, J. R.,	*Sacramento*	18
Jones, J. W.,	*San Francisco*	22
Jones, J. P.,	*Los Angeles*	9
Jones, K. P.,	*Olive View*	9
Jones, L. E.,	*Roseville*	16
Jones, N.,	*Hollywood*	9
Jones, N. R.,	*Sacramento*	18
Jones, O. C.,	*Santa Maria*	26
Jones, O. W.,	*San Anselmo*	10
Jones, O. W., Jr.,	*San Francisco*	22
Jones, R. B.,	*San Francisco*	22
Jones, R. A.,	*San Francisco*	22
Jones, R. M.,	*Ventura*	37
Jones, R. M.,	*Bakersfield*	7
Jones, W. H.,	*Long Beach*	9
Jones, W. H. G.,	*Los Gatos*	27
Jones, W. A.,	*Arlington*	17
Jones, Z. G.,	*Long Beach*	9
Jordan, P. A.,	*San Jose*	27
Jorgenson, H. C.,	*San Diego*	21
Jorgenson, N.,	*Fresno*	4
Jorgenson, S. N.,	*San Francisco*	22
Josephs, L.,	*Los Angeles*	9
Josephson, J. B.,	*San Jose*	27
Judd, G. E.,	*Los Angeles*	9
Judge, W. D.,	*Los Angeles*	9
Judson, H. A.,	*Santa Monica*	9
Juenemann, G. F.,	*Los Angeles*	9
Julien, A. E.,	*Turlock*	33

K

Kaarboe, O.,	*San Francisco*	22
Kaelber, A. P.,	*San Francisco*	22
Kaffesieder, L. I.,	*Los Angeles*	9

NAME	COUNTY	COUNTY SOCIETY NO.
Kahl, C. W.,	*Merced*	12
Kahn, J.,	*Los Angeles*	9
Kahn, M. G.,	*Los Angeles*	9
Kalfus, J. L.,	*Santa Maria*	26
Kalichman, G. S.,	*Santa Monica*	9
Kalman, S.,	*Berkeley*	16
Kane, L. M.,	*Los Angeles*	9
Kanner, H. M.,	*Sacramento*	18
Kaplan, H. E.,	*Stockton*	23
Kaplan, M.,	*Los Angeles*	9
Kapp, M. W.,	*San Jose*	27
Kapp, R. W.,	*San Jose*	27
Kaps, F. O.,	*Santa Ana*	15
Karaki, Y.,	*Los Angeles*	9
Karras, R. W.,	*Sawtelle*	9
Karshner, R. G.,	*Los Angeles*	9
Katz, B.,	*Los Angeles*	9
Kaufman, R.,	*San Francisco*	22
Kavanagh, M. F.,	*San Francisco*	22
Kavinoky, N. R.,	*Los Angeles*	9
Kay, G. L.,	*Placentia*	15
Kay, M. M.,	*Shafter*	7
Kay, W. E., Jr.,	*San Francisco*	22
Kaysen, R.,	*San Diego*	21
Kearney, P. A.,	*San Francisco*	22
Kearney, W. B.,	*San Francisco*	22
Keating, V. J.,	*Los Angeles*	9
Keeler, N. S.,	*Oakland*	1
Keenan, A. S.,	*San Francisco*	22
Keeney, M. J.,	*Los Angeles*	9
Keiper, G. F.,	*Los Angeles*	9
Keith, C. F.,	*Williams*	28
Kelker, G. D.,	*San Rafael*	24
Kell, F. B.,	*San Bernardino*	20
Keller, N. F.,	*Los Angeles*	9
Keller, S. H.,	*Riverside*	17
Kelley, G. A.,	*Bridgeport*	4
Kelley, J. W.,	*Los Angeles*	9
Kelleyan, Y. K.,	*Los Angeles*	9
Kellogg, E. C.,	*Los Angeles*	9
Kellogg, L. C.,	*Loma Linda*	20
Kellogg, W. H.,	*Berkeley*	1
Kelly, E. E.,	*Pomona*	9
Kelly, F. L.,	*Berkeley*	1
Kelly, T. H.,	*San Francisco*	22
Kelsey, T. W.,	*Sacramento*	18
Kemner, C. A. S.,	*Escondido*	21
Kendall, O. J.,	*San Diego*	21
Kennedy, K. E.,	*Oakland*	1
Kennell, L. A.,	*San Diego*	21
Kenney, E. W.,	*Oakland*	1
Kennicott, R. H.,	*Los Angeles*	9
Kergan, H. S.,	*Oakland*	1
Kerlan, M.,	*Beverly Hills*	9
Kern, R. C.,	*Jackson*	18
Kerr, W. J.,	*San Francisco*	22
Kerrick, S. E.,	*Hollywood*	9
Kersten, E. H. W.,	*Anaheim*	15
Kersten, H. M.,	*Los Angeles*	9
Keser, M. D.,	*Richmond*	3
Kessler, E. E.,	*Los Angeles*	9
Key, W. A.,	*San Francisco*	22
Keyes, H. R.,	*Los Angeles*	9
Kibbe, M. E.,	*Oakland*	1
Kibby, S. V.,	*Los Angeles*	9
Kidder, F. W. K.,	*Los Angeles*	9
Kiefer, H. A.,	*Los Angeles*	9
Kiger, W. H.,	*Los Angeles*	9
Kilbourne, N. J.,	*Los Angeles*	9
Kilduff, R.,	*Oroville*	2
Kile, R. F.,	*San Francisco*	22
Kilgore, A. M.,	*Hollywood*	9
Kilgore, A. R.,	*San Francisco*	22
Kilgore, E. S.,	*San Francisco*	22
Kilgore, G. L.,	*San Diego*	21
Kimball, T. S.,	*Los Angeles*	9
Kimberlin, L. O.,	*San Francisco*	22
Kindall, C. E.,	*Los Angeles*	9
Kindall, L. E.,	*Oakland*	1
King, C. S.,	*Los Angeles*	9
King, E. B.,	*Arroyo Grande*	24
King, E. H.,	*Tujunga*	9
King, H. R.,	*Winters*	38
King, J. A.,	*Ojai*	37
King, J. C. E.,	*San Diego*	21
King, J. M.,	*Los Angeles*	9
King, M. S.,	*Los Angeles*	9
Kinney, L. C.,	*San Diego*	21
Kinney, M. A. J.,	*Los Angeles*	9
Kindopp, D. M.,	*Colfax*	16
Kinslow, F. A.,	*San Francisco*	22
Kirby, J. M.,	*Bakersfield*	7
Kirchner, A. A.,	*San Fernando*	9
Kirchoff, J. J.,	*Los Angeles*	9
Kirk, A. W.,	*San Francisco*	22
Kirk, J. H.,	*Palo Alto*	27
Kirk, M. E.,	*Oakland*	1
Kirkpatrick, J. E.,	*Los Angeles*	9
Kirkpatrick, J. L.,	*Los Angeles*	9
Kirkpatrick, J. H.,	*Los Angeles*	9
Kirsch, R. L.,	*Pasadena*	9
Kirwin, J. J.,	*Ukiah*	11
Kiskadden, W. S.,	*Los Angeles*	9
Kistinger, W. F.,	*Santa Ana*	15
Kistler, R. H.,	*San Francisco*	22
Kitagawa, K. J.,	*San Francisco*	22
Kitsuda, F. Y.,	*Sacramento*	18
Kittle, W. F.,	*Los Angeles*	9
Kiyasu, K.,	*San Francisco*	22
Kjaerbye, C. P. H.,	*Fresno*	4
Klein, Israel,	*Los Angeles*	9
Klein, J. M.,	*Hollywood*	9
Klick, J. J.,	*Sacramento*	18
Klussmann, H. O. G. T.,	*San Francisco*	22
Klutho, J. C.,	*Los Angeles*	9
Knapp, E. V.,	*San Francisco*	22
Knceshaw, R. S.,	*San Jose*	27
Knight, L. C.,	*San Francisco*	22
Knorp, W. F.,	*Burlingame*	25
Knorr, L. R.,	*Concord*	3
Knox, C. R.,	*El Cajon*	21
Kocher, R. A.,	*Carmel*	13
Koda, K.,	*Watsonville*	28
Koebig, W. C. S.,	*Los Angeles*	9
Koefod, H. O.,	*Santa Barbara*	26
Koehler, A. E.,	*Santa Barbara*	26
Koenecke, H. J.,	*Salinas*	13
Koepke, F. H.,	*Watsonville*	28
Koetter, G. F.,	*Los Angeles*	9
Koford, H.,	*Oakland*	1
Kohlhase, L. H.,	*Los Angeles*	9
Kohlmoos, H. J.,	*Oakland*	1
Kohn, F.,	*Tulare*	35
Kolda, F. O.,	*Alhambra*	9
Kolisch, J. M.,	*Los Angeles*	9
Konantz, O. F.,	*Hollywood*	9
Konigmacher, A. H.,	*Fresno*	4
Konttas, P. V.,	*Santa Rosa*	32
Koplin, H.,	*Los Angeles*	9
Korshet, M.,	*San Francisco*	22
Kosky, A. W.,	*Santa Monica*	9
Kosky, A. A.,	*Santa Monica*	9
Kosterlitz, E.,	*Berkeley*	1
Kracaw, F. C.,	*Oakland*	1
Kraft, R. W.,	*Pasadena*	9
Krahulik, E. J.,	*Hollywood*	9
Kramar, L. G.,	*Fortuna*	5
Krause, R. A.,	*Los Angeles*	9
Kreinman, S. G.,	*Los Angeles*	9
Kremers, E. D.,	*Pasadena*	9
Kress, G. H.,	*Los Angeles*	9
Kretzschmar, K. E.,	*Los Angeles*	9
Kristensen, W. A.,	*Los Angeles*	9
Kreutzmann, H. A. R.,	*San Francisco*	22
Kroener, W. F.,	*Whittier*	9
Kroger, W. P.,	*Los Angeles*	9
Krohn, H. N.,	*Los Angeles*	9
Kroll, F. W.,	*San Francisco*	22
Krout, B. M.,	*Stockton*	23
Krueger, A. P.,	*Berkeley*	22
Krull, F.,	*Sacramento*	18
Kruse, F. H.,	*San Francisco*	22
Kruse, F. L.,	*San Francisco*	22
Kryder, G. B.,	*Glendale*	9
Kuder, W. S.,	*Oakland*	1
Kuhn, O. E.,	*Oakland*	1
Kulaev, A. A. M.,	*San Francisco*	22
Kurtz, C.,	*Los Angeles*	9
Kusel, E. A.,	*Oroville*	2
Kuser, J. H.,	*San Rafael*	10
Kutzmann, A. A.,	*Los Angeles*	9
Kyddson, T. W.,	*Linden*	23
Kylberg, H.,	*Merced*	12

L

Lacayo, J. R.,	*Los Angeles*	9
Lacey, J. M.,	*Los Angeles*	9
Lacey, L. E.,	*Oakland*	1
Lacey, M. J.,	*Albany*	1
Lackey, H. J.,	*Oakland*	1
Lackner, L.,	*San Jose*	27
Lacoe, J. R.,	*Los Angeles*	9
Laddon, R. M.,	*San Francisco*	22
Lafontaine, E. C.,	*San Francisco*	22
Lagan, E.,	*San Francisco*	22
Laist, O.,	*San Francisco*	22
Lake, T. O.,	*Berkeley*	1
Lakey, W. J.,	*Reseda*	9
Lamb, E. J.,	*Santa Barbara*	26
Lamb, L. M.,	*Oakland*	1
Lambert, E. J.,	*Los Angeles*	9
Lambertson, E. R.,	*Los Angeles*	9
Lamkin, B. B.,	*Fresno*	4
La Mont, W.,	*Beverly Hills*	9
La Motte, L. A. J.,	*Los Angeles*	9
Lamson, M.,	*Palo Alto*	27
Lamson, R. W.,	*Los Angeles*	9
Lancaster, J. S.,	*Torrance*	9
Landegger, G. P.,	*Los Angeles*	9
Landis, C. C.,	*San Francisco*	22
Lando, M. E.,	*Oakland*	1
Landon, G. S.,	*San Bernardino*	20
Landrock, G. M.,	*Mill Valley*	10
Lane, C. W.,	*Coronado*	21
Lane, C. R.,	*Los Angeles*	9
Lane, E. H.,	*Los Angeles*	9
Lane, J. A.,	*Eureka*	5
Lang, J. H.,	*Fullerton*	15
Langan, A. J.,	*San Pedro*	9
Langdon, E. E.,	*Pasadena*	9
Langdon, S. W. R.,	*Stockton*	23
Langer, J.,	*Hilt*	30
Langley, R. W.,	*Los Angeles*	9
Langnecker, H. L.,	*San Francisco*	22
Langstroth, L.,	*San Francisco*	22
Lanphere, G. H.,	*Los Angeles*	9
Larkey, J.,	*Oakland*	1
Larner, T. E.,	*Marysville*	39
Larsen, A. E.,	*San Francisco*	22
Larsen, J. W.,	*Paso Robles*	24
Larson, A. E.,	*Los Angeles*	9
Larson, A. H.,	*Los Angeles*	9
Larson, C. F.,	*Sausalito*	1
Larson, E. E.,	*Los Angeles*	10
Larson, E. A.,	*Kingsburg*	4
Lartigau, A. J.,	*San Francisco*	22
Larzalere, J. V.,	*Escondido*	21
Lasswell, B. J.,	*Quincy*	8
Laton, G. P.,	*Los Angeles*	9
Latta, S. E.,	*Stockton*	23
Laubersheimer, G. A.,	*Los Angeles*	9
Lauder, C. H.,	*Los Angeles*	9
Lavery, W. A.,	*Loyalton*	16
Law, C. H.,	*Weaverville*	24
Lawhead, H. D.,	*Woodland*	38
Lawler, P. W.,	*Victorville*	20
Lawler, W. H.,	*Salinas*	13
Lawson, J. D.,	*Sacramento*	38
Lawson, T. C.,	*Oakland*	1
Lawyer, P. C.,	*Inglewood*	9
Layman, M. H.,	*San Francisco*	22
Lazard, E. M.,	*Los Angeles*	9
Lazelle, H. G.,	*La Jolla*	21
Leach, W. O.,	*Glendale*	9
Leachman, R. S.,	*Vallejo*	31
Leake, N. A.,	*Torrance*	9
Leake, W. H.,	*Los Angeles*	9
Leavitt, A. S.,	*Los Angeles*	9
Leavitt, F. J.,	*Los Angeles*	9
Le Baron, R. O.,	*Talmage*	11
Ledford, R. M.,	*San Diego*	21
Le Duc, I. E.,	*San Jose*	27
Ledyard, C. C.,	*Los Angeles*	9
Lee, D.,	*San Jose*	27
Lee, E. C.,	*San Diego*	21
Lee, F. J.,	*Santa Monica*	9
Lee, F. W.,	*Sacramento*	18
Lee, H. H.,	*San Jose*	27
Lee, J. S. M.,	*San Francisco*	22
Lee, L. H.,	*Los Angeles*	9
Lee, R. V. A.,	*Palo Alto*	27
Leech, C. R.,	*Walnut Creek*	3
Leef, E.,	*San Francisco*	22
Leet, N. B.,	*Oakland*	1
Leet, R. S.,	*Oakland*	1
Leete, C. M.,	*Pasadena*	9
Lefler, A. B.,	*Los Angeles*	9
Leftwich, O. T.,	*Oakland*	1
Legge, R. T.,	*Berkeley*	1
Leggitt, R. C.,	*Burbank*	9
Leggo, R. C.,	*Crockett*	3
Leidig, L. R.,	*Porterville*	35
Leimbach, J. H.,	*Isleton*	18
Leiva, C.,	*New York*	22
Leland, H. G.,	*Klamath*	5
Leland, S.,	*San Francisco*	22
Lemere, H. B.,	*Los Angeles*	9
Lenahan, F. P.,	*San Diego*	21
Lenahan, G. T.,	*San Francisco*	22
Lenahan, J. A.,	*San Francisco*	22
Lenker, W. D.,	*San Bernardino*	20
Lennon, M. B.,	*San Francisco*	22
Lennon, T. J.,	*San Francisco*	22
Leonard, A. T.,	*San Francisco*	22
Leonard, E. M.,	*San Francisco*	22
Leonard, J. V.,	*San Francisco*	22
Leonard, W. E.,	*Los Angeles*	9
Lepper, L. E.,	*Los Angeles*	9
Lesem, A. M.,	*San Diego*	21
Lessard, M. D.,	*South San Francisco*	25
Lettice, F. E.,	*Los Angeles*	9
Leuschner, C. E.,	*Los Angeles*	9
Levengood, H. W.,	*Santa Monica*	9
Leveton, A. L.,	*San Francisco*	22
Levin, H. A.,	*Los Angeles*	9
Levin, W.,	*Fresno*	4
Levison, C. G.,	*San Francisco*	22
Levitin, J.,	*San Francisco*	22
Leviton, H. I.,	*Los Angeles*	9
Levy, J. J.,	*Reedley*	4
Levy, S.,	*Los Angeles*	9
Lew, G. H.,	*Los Angeles*	9
Lewis, C. H.,	*Santa Monica*	9
Lewis, C. E.,	*Auburn*	16
Lewis, E. B.,	*Los Angeles*	9
Lewis, E. R.,	*Los Angeles*	9
Lewis, J. D.,	*Santa Barbara*	26
Lewis, K.,	*Beverly Hills*	9
Lewis, L.,	*Eldridge*	32
Lewis, L. R.,	*Los Angeles*	9

NAME	COUNTY	COUNTY SOCIETY NO.
Lewis, M. L., *Petaluma*		32
Lewis, S. A., *Hollywood*		9
Libby, A. A., *Pasadena*		9
Liddell, E. B., *Los Angeles*		9
Lien, F. O., *Merced*		12
Liles, L. M., *Watsonville*		28
Liliencrantz, G. H., *Oakland*		1
Liljedahl, E. N., *Los Angeles*		9
Liljencrantz, E., *Oakland*		1
Lilley, W. E., *Merced*		12
Linde, F. G., *San Francisco*		22
Lindberg, A. L., *Los Angeles*		9
Lindenberg, F., *Los Angeles*		9
Lindquist, C. A., *Los Angeles*		9
Lindsay, C. V., *Encinitas*		21
Lindsay, H. C. L., *Pasadena*		9
Lindsay, W. K., *Sacramento*		18
Lindsley, St. C. R., *Los Angeles*		9
Lineer, A. S., *Los Angeles*		9
Linhart, L. R., *Los Angeles*		9
Linn, J. L., *Glendale*		9
Linthicum, F. H., *Los Angeles*		9
Lipkis, A., *Los Angeles*		9
Lipp, M. J., *Sacramento*		18
Lippman, M. H., *San Francisco*		22
Lipson, B., *Los Angeles*		9
Lipson, I. M., *Visalia*		35
Lisser, H., *San Francisco*		22
Lissner, H. H., *Los Angeles*		9
Lista, L. J., *Yreka*		30
Liston, E., *Palo Alto*		27
Litle, E. W., *Los Angeles*		9
Little, R. P., *Santa Paula*		37
Little, T. C., *San Diego*		21
Livingston, W. R., *Oxnard*		37
Lobingier, A. S., *Los Angeles*		9
Lockwood, M. S., *National City*		21
Lockwood, S. A., *National City*		21
Lodge, E. S., *Los Angeles*		9
Loe, H. D., *Oakland*		1
Loehr, B. E., *San Jose*		27
Logan, N. H., *Oakland*		1
Logsdon, R. O., *San Diego*		21
Lohmann, H G., *Oakland*		1
Lohse, J. L., *Oakland*		1
Loizeaux, E. S., *San Diego*		21
Lokrantz, S. R., *Los Angeles*		9
Lonergan, L., *Loma Linda*		20
Long F. E., *Los Angeles*		9
Long, G. L., *Fresno*		4
Long J. C., *San Francisco*		22
Long, S. C., *Bakersfield*		7
Longabaugh, R. I., *Vallejo*		31
Look, H. H., *Sacramento*		18
Loomis, F. M., *Oakland*		1
Loos, H. C., *Los Angeles*		9
Looser, R. V., *Hollywood*		9
Lopizich, I. J., *Los Angeles*		9
Lordan, J. P., *Los Angeles*		9
Lorentz, R., Jr., *San Francisco*		22
Lorenz, H. E., *Sacramento*		18
Loring, F. W., *Glendale*		9
Loughlin, E. L., *Los Angeles*		9
Lounsberry, C. R., *San Diego*		21
Loutzenheiser, J. J., *San Francisco*		22
Lovas, A., *San Francisco*		9
Love, C. A., Jr., *San Bernardino*		20
Love, E. C., *Calistoga*		14
Lovejoy, E. D., *Los Angeles*		9
Lovely, J. P., *San Jose*		27
Loveren, G. S., *Santa Barbara*		26
Low, T. C., *Los Angeles*		9
Lowe, F. A., *San Francisco*		22
Lowman, C. L. R., *Los Angeles*		9
Lubin, M. L., *San Francisco*		22
Lucas, W., *Los Angeles*		9
Lucas, W. C., *Los Angeles*		9
Lucas, W. P., *San Francisco*		22
Lucas, W. S., *Richmond*		3
Lucey, D. D., *Los Angeles*		9
Luckie, J. B., *Pasadena*		9
Luechauer, K. D., *Coalinga*		4
Lum, D. D., *Alameda*		1
Lum, T. A., *Dos Palos*		12
Lum, W. T., *Alameda*		1
Lumsden, A. G., *Petaluma*		32
Lund, E. S., *Willows*		38
Lund, Le V., *Los Angeles*		9
Lundegaard, E. M., *Oakland*		1
Lundquist, D. T., *Palo Alto*		27
Lunsford, C. J., *Oakland*		1
Lurie, S. A., *Los Angeles*		9
Lusignan, H. R., *Monterey*		13
Luton, G. R., *Santa Barbara*		26
Luttrell, P. H., *San Francisco*		22
Lyle, A. G., *San Francisco*		22
Lyman, G. D., *San Francisco*		22
Lyman, T., *Sacramento*		18
Lynch, E. C., *Montebello*		9
Lynch, F. W., *San Francisco*		22
Lynch, J. G., *Los Angeles*		9
Lynch, W. P., Jr., *Stockton*		23
Lyster, T. C., *Los Angeles*		9

M

NAME	COUNTY	COUNTY SOCIETY NO.
Mabee, M., *Santa Ana*		15
MacBeth, W. L. C., *El Monte*		9
MacColl, D. R., *Los Angeles*		9
MacCracken, W. B., *Berkeley*		1
MacDonald, F. A., *Sacramento*		18
MacDonald, H. E., *Redding*		29
MacDonald, R. P., *Los Angeles*		9
Mace, L. S., *San Francisco*		22
MacGowan, D. G., *Los Angeles*		9
Mack, A. E., *Glendale*		9
Mack, C. W., *Livermore*		1
Mackay, J. G., *Auburn*		16
Mackenzie, W. W., *Hollywood*		9
Mackey, J. G., *San Fernando*		9
Mackintosh, W. C., *San Francisco*		22
Macklin, R. K., *Pasadena*		9
MacLafferty, N. C., *Soquel*		28
MacLaughlin, W. E., *Los Angeles*		9
MacLean, H. G., *Oakland*		1
MacLean, J., *Los Angeles*		9
Macleish, A. C., *Los Angeles*		9
Maclennan, A. L., *Pasadena*		9
MacMillan, D. W., *Los Angeles*		9
MacMillan, H. A., *Long Beach*		9
Macomber, E. B., *Burlingame*		25
Macomber, H. W., *Burlingame*		25
Macpherson, D. G., *San Francisco*		22
Macpherson, F. L., *San Diego*		21
Macpherson, J. F., *San Diego*		21
Macpherson, W. E., *Loma Linda*		20
MacRae, A. D., *San Francisco*		22
Madden, T. F., *Fresno*		4
Madsen, L. J., *Santa Monica*		9
Magan, P. T., *San Marino*		9
Magan, S. S., *Covina*		9
Magan, W. P., *Covina*		9
Maghy, C. A., *Los Angeles*		9
Magrath, W. A. S., *Oakland*		1
Mahan, D. J., *Santa Rosa*		32
Mahan, L. B., *San Diego*		21
Mahannah, L. D., *Long Beach*		9
Mahoney, L. E., *Santa Monica*		9
Main, R. C., *Santa Barbara*		26
Majer, R. G., *Los Angeles*		9
Majors, E. A., *Oakland*		1
Makinson, F. R., *Oakland*		1
Malaby, Z. T., *Pasadena*		9
Malis, S., *Los Angeles*		9
Malkin, G. M., *Huntington Park*		9
Mallery, J. H., *San Fernando*		21
Malmgren, G. E., *Los Angeles*		9
Malone, F. F., *Los Angeles*		9
Malone, M. C., *San Francisco*		22
Malone, W. M., *San Francisco*		22
Maloney, H. P., *Oakland*		1
Malsbary, G. E., *Los Angeles*		9
Mandel, G., *Mexico*		9
Mandeville, F. B., *Oakland*		1
Maner, G. D., *Los Angeles*		9
Mangan, L. A., *Wilmington*		9
Mangan, P. J., *San Francisco*		22
Manley, D. J., *Hayward*		1
Mann, H. H., *Los Angeles*		9
Mann. V. L., *Los Angeles*		9
Manning, T. P., *Los Angeles*		9
Manning, W. R., *Fillmore*		37
Mansfeldt, J. H., *San Francisco*		22
Mansfield, T. D., *Huntington Park*		9
Manson, G., *Fresno*		4
Manson, R. M., *Hayward*		1
Mantle, V. M., *Los Angeles*		9
March, W. B., *Burson*		23
Marchildon, J. W., *Los Angeles*		9
Marcus, D. B., *Imperial*		6
Marcus, H., *San Francisco*		22
Mardis, B. A., *San Francisco*		22
Mark, A. E., *Hollywood*		9
Markel, H. H., *San Francisco*		22
Markolf, H. F., *Pasadena*		9
Marks, J. H., *Los Angeles*		9
Marks, M., *Long Beach*		9
Marks, S. H., *Pittsburg*		3
Markthaler, E. L., *Santa Barbara*		26
Marnell, F. S., *Stockton*		23
Maroon, J. L., *Santa Ana*		15
Marquis, C. E., *Oakland*		1
Marsan, D. A., *Oakland*		1
Marsden, C. S., *San Diego*		21
Marsden, S. A., *Santa Ana*		15
Marsh, C., *Sebastopol*		32
Marsh, O. G., *San Diego*		21
Marshall, B. M., *Eureka*		5
Marshall, H. K., *Glendale*		9
Marshall, J. M., *San Luis Obispo*		24
Marshall, O. C., *Watsonville*		28
Marston, C. B., *San Rafael*		10
Marston, H. E., *San Rafael*		10
Martell, B. S., *Santa Ana*		15
Martin, A. L., *Hayward*		1
Martin, A. T., *Los Angeles*		9
Martin, E. P. C., *San Diego*		21
Martin, G. S., *Susanville*		8

NAME	COUNTY	COUNTY SOCIETY NO.
Martin, H. W., *Los Angeles*		9
Martin, J. R., *Los Angeles*		9
Martin, J. F., *Los Angeles*		9
Martin, J. P., *Oakland*		1
Martin, L. E., *Los Angeles*		9
Martin, M. L., *Los Angeles*		9
Martin, P. T., *San Jose*		27
Martin, R. C., *San Francisco*		22
Martin, R. C., *San Bernardino*		20
Martin, W. D., *Los Angeles*		9
Martineau, A. S., *Los Angeles*		9
Martine, A., *La Jolla*		21
Martins, S. M., *Los Angeles*		9
Martyn, G., *Los Angeles*		9
Marx, R., *Los Angeles*		9
Marxer, W. L., *Los Angeles*		9
Marxmiller, H. G., *Los Angeles*		9
Mason, B. S., *San Jose*		27
Mason, B. B., *Laguna Beach*		15
Mason, C. V., *Livermore*		1
Mason, H. E., *Redwood City*		25
Mason, M. I., *San Jose*		27
Mason, V. R., *Los Angeles*		9
Mathé, C. P., *San Francisco*		22
Mathes, M. E., *San Francisco*		22
Mathews, S. S., *Los Angeles*		9
Mathewson, C., *Fresno*		4
Mathewson, E., *Bostonia*		21
Matlock, T. T., *Wasco*		7
Matsumura, K., *San Francisco*		22
Mattison, C. W., *Los Angeles*		9
Mattison, E. G., *Pasadena*		9
Mattison, S. J., *Pasadena*		9
Matzger, E., *San Francisco*		22
Matzke, D. E., *Carmel*		13
Maupin, J. L., Jr., *Fresno*		4
Mawdsley, H. L., *San Mateo*		25
Maxson, E. S., *Alhambra*		9
Maxwell, A. F., *San Francisco*		22
Maxwell, R. E., *Modesto*		33
May, H. C., *Los Angeles*		9
May, J. A., *San Diego*		21
May, L. B., *Bakersfield*		7
Mayer, H. J., *Los Angeles*		9
Mayers, M. M., *Los Angeles*		9
Mayes, W. C., *Santa Ana*		15
Mayfield, C., *Long Beach*		9
Mayman, E., *Modesto*		33
Maynard, M. T-R., *San Jose*		27
Mayne, W. H., *Los Angeles*		9
Mays, A. H., *Sausalito*		10
McAllister, H. R., *Taft*		7
McAllister, O. O. T., *Oakland*		1
McAnally, J. F., *Roseville*		18
McArthur, A. W., *Lincoln*		16
McArthur, D. D., *Los Angeles*		9
McArthur, P. R., *Los Angeles*		9
McAtee, J. S., *Los Angeles*		9
McAuley, J., *Santa Ana*		15
McBride, R. W., *Burlingame*		25
McBride, W. C., Jr., *Yreka*		30
McBurney, B. A., *Pomona*		9
McBurney, R. D., *Los Angeles*		9
McCallister, C. H., *Los Angeles*		9
McCann, D. B., *Los Angeles*		9
McCann, D. F., *McCloud*		30
McCann, F. E., *Monrovia*		9
McCarthy, F. J., *San Francisco*		22
McCarthy, H. L., *Los Angeles*		9
McCarthy, J. B., *Carmel*		13
McCarty, I. A., *Los Angeles*		9
McCarty, H., *Agnew*		27
McCarty, R. B., *Riverside*		17
McCausland, W. S., *Chula Vista*		21
McChesney, G. J., *San Francisco*		22
McCleave, T. C., *Berkeley*		1
McClelland, E. S., *Los Angeles*		9
McClelland, J. H., *San Francisco*		22
McClendon, S. J., *San Diego*		21
McClure, G., *Oakland*		1
McClure, J. C., *Lindsay*		35
McClure, J. L., *San Francisco*		22
McClurkin, A. A., *Los Angeles*		9
McColl, J. M., *San Diego*		21
McColl, W. F., *San Diego*		21
McCombs, V., *Los Angeles*		9
McConnell, O. G., *San Jose*		27
McCool, J. L., *San Francisco*		22
McCool, W. F., *Los Angeles*		9
McCoskey, G., *Stockton*		23
McCoy, C. A., *Los Angeles*		9
McCoy, E. T., *Los Angeles*		9
McCradle, R. D., *Oakland*		1
McCrary, J. G., *San Francisco*		22
McCrea, F. R., *Long Beach*		9
McCue, J. E., *Crows Landing*		33
McCullough, F. E., *Sacramento*		18
McCullough, J. M., *Crockett*		3
McCullough, W. A., *Van Nuys*		9
McDonald, A. C., *Huntington Park*		9
McDonald, G. H., *Ocean Beach*		21
McDonald, J., *San Francisco*		22
McDonnell, C. H., *Sacramento*		18
McDowell, B. E., *Merced*		12

NAME	COUNTY	COUNTY SOCIETY NO.
McDowell, C. A.,	*Covina*	9
McElhinney, P. P. B.,	*Long Beach*	9
McElroy, B. F.,	*San Francisco*	22
McFarlane, A. H.,	*Mountain View*	27
McGarvey, H.,	*Atascadero*	24
McGavack, T. H.,	*San Francisco*	22
McGee, R. P.,	*Los Angeles*	9
McGibbon, D.,	*Los Angeles*	9
McGinnis, J. J.,	*New York*	22
McGovney, R. B.,	*Los Angeles*	9
McGranahan, J. H.,	*Long Beach*	9
McGrath, A. K.,	*Sonoma*	14
McGuinness, J. E.,	*San Francisco*	22
McGuire, J. J.,	*San Francisco*	22
McGuire, T. E.,	*Burbank*	9
McGurk, R. T.,	*Stockton*	23
McHugh, T. R.,	*Los Angeles*	9
McIntosh, A. M.,	*Berkeley*	1
McKay, E. E.,	*Hollister*	19
McKay, W. T.,	*Long Beach*	9
McKee, C. B.,	*Sacramento*	18
McKee, E. N.,	*Eagle Rock*	9
McKee, K. S.,	*Bakersfield*	7
McKee, W. C.,	*Los Angeles*	9
McKeehan, G. O.,	*Los Angeles*	9
McKeever, F. M.,	*Los Angeles*	9
McKellar, J. H.,	*Pasadena*	9
McKelvy, R. W.,	*Los Angeles*	9
McKenna, W. J.,	*Los Angeles*	9
McKenney, A. C., Jr.,	*San Francisco*	22
McKenney, A. C.,	*San Francisco*	22
McKenney, J. A.,	*Oakland*	1
McKenney, P. W.,	*Alturas*	8
McKenzie, C. R.,	*Oakland*	1
McKenzie, R. B.,	*San Francisco*	22
McKibbin, J.,	*Los Angeles*	9
McKibbon, F. W.,	*Oakdale*	33
McKinnon, A. A.,	*Placerville*	18
McKinnon, D. D.,	*Los Angeles*	9
McKinnon, G. W.,	*Arcata*	5
McKnight, W. B.,	*Portola*	8
McLain, L. C.,	*Bakersfield*	7
McLaren, J. L.,	*Bell*	9
McLaughlin, R. C.,	*Los Angeles*	9
McLaughlin, T. H.,	*Hollywood*	9
McLean, D.,	*Sacramento*	18
McLeish, A. H.,	*Yountville*	14
McLellan, G. H.,	*San Diego*	21
McLeod, F. L.,	*Los Angeles*	9
McLeod, J. H.,	*Santa Rosa*	32
McManus, F. P.,	*Esparto*	38
McMillan, E. H.,	*Pasadena*	9
McMullin, S.,	*Yuba City*	39
McMurdo, P. F.,	*San Francisco*	22
McMurtry, M. S.,	*Clovis*	4
McNab, T. R.,	*Los Angeles*	9
McNamara, D. H.,	*Santa Barbara*	26
McNamara, T. M., Jr.,	*Bakersfield*	7
McNealy, F. E.,	*Los Angeles*	9
McNeil, D.,	*Sacramento*	38
McNeil, H. G.,	*Los Angeles*	9
McNeil, W. T.,	*Stockton*	23
McNeile, L. G.,	*Los Angeles*	9
McNeile, O. M.,	*Los Angeles*	9
McNulty, A. H.,	*San Francisco*	22
McPharlin, J. H.,	*Salinas*	13
McPhee, V. C.,	*San Francisco*	22
McPheeters, E. R.,	*Modesto*	33
McPherson, M. D.,	*Santa Cruz*	28
McQuade, J.,	*San Francisco*	22
McReynolds, R. P.,	*Los Angeles*	9
McWhirter, W. L.,	*Centerville*	1
Meade, F. J.,	*Los Angeles*	9
Meads, A. M.,	*Oakland*	1
Meals, R. W.,	*Los Angeles*	9
Means, P. C.,	*Santa Barbara*	26
Medigovich, D. V.,	*Los Angeles*	9
Meherin, J. M.,	*San Francisco*	22
Mehlin, G. B.,	*San Diego*	21
Mehrmann, H. B.,	*Oakland*	1
Meininger, L. L.,	*San Francisco*	22
Meininger, W. M.,	*San Francisco*	22
Meland, O. N.,	*Los Angeles*	9
Melkonian, L.,	*Gilroy*	27
Mellinger, W. J.,	*Santa Barbara*	26
Melnick, L. I.,	*Los Angeles*	9
Melvin, J. T.,	*Porterville*	35
Mendelsohn, L.,	*Saratoga*	27
Meneray, P. A.,	*Santa Rosa*	32
Mensor, M. C.,	*San Francisco*	22
Mentzer, M. J.,	*San Francisco*	22
Mentzer, S. H.,	*San Francisco*	22
Meredith, H. H.,	*Oakland*	1
Merkle, H. J.,	*Los Angeles*	9
Merrill, B. E.,	*Oakland*	1
Merrill, E. R.,	*Santa Barbara*	26
Merrill, H. P.,	*Los Angeles*	9
Merrill, J. A.,	*Monterey*	13
Merrill, R. E.,	*Burbank*	9
Merrill, W. L.,	*Campbell*	27
Merrithew, E. W.,	*Martinez*	3
Merritt, E. S.,	*San Francisco*	22
Metcalf, J. T.,	*Los Angeles*	9
Mettier, S. R.,	*San Francisco*	22
Meyenberg, W. D.,	*Salinas*	13
Meyer, A. J.,	*Glendale*	9
Meyer, H.,	*San Francisco*	22
Meyer, W. F.,	*San Diego*	21
Meyers, E. M.,	*Oakland*	1
Meyers, E. L.,	*Chico*	2
Michael, L.,	*San Leandro*	1
Michael, P. P.,	*Oakland*	1
Michelena, N. A.,	*Los Angeles*	9
Michelson, L.,	*San Francisco*	22
Mikels, B. M.,	*Long Beach*	9
Mikels, F. M.,	*Hollywood*	9
Miles, R. H.,	*Alameda*	1
Miles, S. H.,	*Olive View*	9
Miles, W. L.,	*Los Angeles*	9
Milholland, W. G.,	*Fresno*	4
Miller, A. W.,	*Riverside*	17
Miller, A. V.,	*Porterville*	35
Miller, C. H.,	*San Leandro*	1
Miller, C. M., Jr.,	*Olive View*	9
Miller, E. M.,	*Los Gatos*	27
Miller, E. P.,	*Riverside*	17
Miller, F. W.,	*Los Angeles*	9
Miller, H. A.,	*Alameda*	1
Miller, H. A.,	*Los Angeles*	9
Miller, H. E.,	*San Francisco*	22
Miller, H.,	*Los Angeles*	9
Miller, I. S.,	*Colton*	20
Miller, J. E.,	*West Los Angeles*	9
Miller, L. G.,	*Imola*	14
Miller, N.,	*Porterville*	35
Miller, O. A.,	*Talmage*	11
Miller, R. F.,	*Los Angeles*	9
Miller, R. W.,	*Los Angeles*	9
Miller, R. R.,	*Pasadena*	9
Miller, S. J.,	*Long Beach*	9
Miller, T.,	*San Diego*	21
Miller, T. K.,	*Patton*	20
Miller, W. J.,	*Los Angeles*	9
Miller, W. McC.,	*Auburn*	16
Milliken, W. P.,	*Oakland*	1
Mills, C. F.,	*Pismo Beach*	24
Mills, L. H.,	*Los Angeles*	9
Mills, W.,	*Oakland*	1
Millspaugh, W. P.,	*Los Angeles*	9
Millzner, R. J.,	*San Francisco*	22
Milo, H. W.,	*Mountain View*	27
Minaker, A. J.,	*San Francisco*	22
Miner, L. L.,	*Los Angeles*	9
Misch, H. B.,	*Los Angeles*	9
Missner, F. R.,	*Oakland*	1
Mitchell, C. O.,	*Fresno*	4
Mitchell, H. H.,	*Oakland*	1
Mitchell, V. H.,	*San Francisco*	22
Mitchell, W. E.,	*Berkeley*	1
Miyasaki, J. H.,	*Sacramento*	18
Miyata, Y.,	*Los Angeles*	9
Mizel, M. L.,	*San Francisco*	22
Mock, D. C.,	*Redlands*	20
Modern, F. S.,	*Los Angeles*	9
Moes, R. J.,	*Los Angeles*	9
Moffat, W. McK.,	*Santa Barbara*	26
Moffett, E. D.,	*Berkeley*	1
Moffitt, E. J.,	*Los Angeles*	9
Moffitt, H. C.,	*San Francisco*	22
Moffitt, T. W.,	*Hollywood*	9
Mogan, R. F.,	*Los Angeles*	9
Mohun, C. C., Jr.,	*San Francisco*	22
Mohun, M.,	*San Mateo*	25
Molgaard, J.,	*San Francisco*	25
Molitor, N.,	*San Diego*	21
Mollath, A. L.,	*Guadalupe*	26
Molony, W. R.,	*Los Angeles*	9
Molony, W. R., Jr.,	*Los Angeles*	9
Monaco, S. R.,	*Los Angeles*	9
Monson, L. F. P.,	*San Francisco*	1
Montalvan, J.,	*Oakland*	1
Monteith, R. F.,	*Redwood City*	25
Montgomery, A. B.,	*San Francisco*	9
Montgomery, C. H.,	*Los Angeles*	9
Montgomery, D. W.,	*San Francisco*	22
Montgomery, J. L.,	*Los Angeles*	9
Montgomery, M. F.,	*San Francisco*	22
Montgomery, M. L.,	*San Francisco*	22
Montgomery, R. R.,	*Long Beach*	9
Montgomery, W. O.,	*San Francisco*	22
Moodie, A. R.,	*Taft*	7
Moody, A. M.,	*San Francisco*	22
Moody, E. E.,	*Los Angeles*	9
Mooney, H. S.,	*Los Angeles*	9
Mooney, T. S.,	*Springville*	35
Moor, F. B.,	*Loma Linda*	20
Moore, A. H.,	*Los Angeles*	9
Moore, A. W.,	*Los Angeles*	9
Moore, C. E.,	*San Jose*	27
Moore, C. B.,	*San Francisco*	22
Moore, D. S.,	*South Pasadena*	9
Moore, E. C.,	*Los Angeles*	9
Moore, G. W.,	*Los Angeles*	9
Moore, G.,	*Oakland*	1
Moore, H. A.,	*Berkeley*	1
Moore, J. B.,	*Fresno*	4
Moore, L. A. R.,	*San Francisco*	22
Moore, L. S.,	*San Jose*	27
Moore, N. L.,	*Santa Ana*	15
Moore, O. M.,	*Bell*	9
Moore, P. H.,	*Hollywood*	9
Moore, R.,	*Los Angeles*	9
Moore, T. V.,	*San Jose*	27
Moore, W. G.,	*San Francisco*	22
Moore, W. H.,	*Bakersfield*	7
Moose, R. M.,	*San Bernardino*	20
Moots, C. W.,	*Mentone*	20
Mordoff, C. E.,	*Oakland*	1
Morgan, F. E.,	*Santa Cruz*	28
Morgan, F. R.,	*Van Nuys*	9
Morgan, F. L.,	*Venice*	9
Morgan, J. W.,	*San Francisco*	22
Morgan, J. D., Jr.,	*Fresno*	4
Morgan, N. D.,	*San Francisco*	22
Morison, C. C.,	*Oakland*	1
Morris, C. A.,	*Bakersfield*	7
Morris, C. L.,	*Eagle Rock*	9
Morris, E.,	*Auberry*	4
Morris, J. K., Jr.,	*Modesto*	33
Morris, K. G.,	*Petaluma*	32
Morris, L. M.,	*San Francisco*	22
Morris, M.,	*San Francisco*	22
Morris, R. L.,	*San Francisco*	22
Morris, R. H.,	*San Francisco*	22
Morrison, L. F.,	*San Francisco*	22
Morrison, N. D.,	*San Mateo*	25
Morrison, R. J.,	*Santa Monica*	9
Morrison, W. A.,	*Los Angeles*	9
Morrissey, E. J.,	*San Francisco*	22
Morrow, H.,	*San Francisco*	22
Morse, D. L.,	*San Francisco*	22
Morse, H. A.,	*Oakland*	1
Mortensen, E. S.,	*Santa Monica*	9
Mortensen, W. S.,	*Santa Monica*	9
Morton, A. W.,	*San Francisco*	22
Morton, D. G.,	*San Francisco*	22
Morton, L. B.,	*Los Angeles*	9
Mosby, G.,	*Oakland*	1
Mosher, W. F.,	*Ventura*	37
Motheral, R.,	*Hanford*	4
Motley, E. G.,	*Santa Ana*	15
Mott, E. L.,	*Fresno*	4
Mottram, L. D.,	*Modesto*	33
Moulton, D. H.,	*Chico*	2
Moulton, E. S.,	*Corning*	34
Mountford, G. T.,	*Coalinga*	4
Movitt, S. I.,	*Los Angeles*	9
Movius, C. M.,	*Los Angeles*	9
Movius, H. J.,	*Los Angeles*	9
Moyle, C. A.,	*Merced*	12
Muckleston, H. S.,	*Los Angeles*	9
Mudd, J. L.,	*Merced*	12
Mudd, S. G.,	*Pasadena*	9
Mueller, R. R.,	*Los Angeles*	9
Mugford, I. K.,	*Sacramento*	18
Mugler, F. R.,	*San Luis Obispo*	24
Muhl, A. M.,	*San Diego*	21
Mulder, E. I.,	*Compton*	9
Mulfinger, C. L.,	*Los Angeles*	9
Mullaly, E. F.,	*Vallejo*	31
Mullen, E. W.,	*Agnew*	27
Mullen, J. L.,	*Sacramento*	18
Mullen, T. F.,	*San Francisco*	22
Muller, H. P.,	*Modesto*	33
Mulligan, H. R.,	*Hollywood*	9
Mullinax, C. E.,	*Los Angeles*	9
Mulvehill, W. W.,	*Los Angeles*	9
Munch, O. L.,	*San Luis Obispo*	24
Munter, E. J.,	*San Francisco*	22
Murakami, K.,	*Salinas*	13
Murphy, H. C.,	*Salinas*	13
Murphy, J. E.,	*Sacramento*	18
Murphy, P. J.	*Los Angeles*	9
Murphy, W. H.,	*San Mateo*	25
Murray, D. H.,	*Napa*	14
Murray, H. W.,	*Pasadena*	9
Murray, S.,	*Los Angeles*	9
Murrieta, A. J.,	*Los Angeles*	9
Musante, A. S.,	*San Francisco*	22
Musser, L. P.,	*Oakland*	1
Myers, C.,	*Los Angeles*	9
Myers, E. E.,	*Boston*	16
Myers, G. E.,	*Los Angeles*	9
Myers, L.,	*San Diego*	21
Myers, O. R.,	*Eureka*	5
Myers, T. C.,	*Los Angeles*	9

N

Naeckel, H. W.,	*Riverside*	17
Naffziger, H. C.,	*San Francisco*	22
Nagel, G. W.,	*San Francisco*	22
Nagelman, C. B.,	*Santa Barbara*	26
Nahman, A. H.,	*San Francisco*	22
Nakaya, F. T.,	*Los Angeles*	9
Napheys, W. D.,	*Los Angeles*	9
Nass, F. C.,	*San Francisco*	22
Nasser, G. E.,	*San Francisco*	22
Nazarin, G. S.,	*San Francisco*	22
Negley, J. C.,	*Los Angeles*	9
Neighbors, C. A.,	*Anaheim*	15
Neil, J. M.,	*Oakland*	1
Nelson, A. E.,	*Los Angeles*	9

NAME	COUNTY	COUNTY SOCIETY NO.
Nelson, A. N.,	*Los Angeles*	9
Nelson, C. F.,	*Los Angeles*	9
Nelson, C. E.,	*England*	14
Nelson, C. V.,	*Los Angeles*	9
Nelson, E. A.,	*Los Angeles*	9
Nelson, F. H.,	*Los Angeles*	9
Nelson, H. C.,	*Santa Ana*	15
Nelson, J. E.,	*Lodi*	23
Nelson, R. C.,	*Beverly Hills*	9
Nelson, R. F.,	*Oakland*	1
Nemir, A.,	*San Francisco*	22
Nesche, G. E.,	*Oakland*	1
Nethercut, R. A.,	*San Francisco*	22
Neubert, A. D.,	*Redlands*	20
Neumann, E. V.,	*Hollywood*	9
Neville, J. E.,	*Glendale*	9
Nevin, J. L.,	*San Bernardino*	20
Nevius, F. P.,	*Antioch*	3
Nevius, J. W.,	*Los Angeles*	9
Newbecker, C. G.,	*Hanford*	4
Newberry, F. J.,	*Los Angeles*	9
Newcomb, A. T.,	*Pasadena*	9
Newell, E.,	*San Jose*	27
Newell, R. R.,	*San Francisco*	22
Newkirk, H. D.,	*Anaheim*	15
Newman, A.,	*San Francisco*	22
Newman, H. P.,	*San Diego*	21
Newman, H. W.,	*San Francisco*	22
Newman, L.,	*San Francisco*	22
Newman, M. H.,	*Los Angeles*	9
Newman, W. H.,	*San Diego*	21
Newman, W. W.,	*San Francisco*	22
Newmark, P.,	*Los Angeles*	9
Newson, H. E.,	*San Francisco*	22
Newton, A. H.,	*Dunsmuir*	30
Newton, E. B.,	*Oakland*	1
Newton, H. D.,	*San Diego*	21
Newton, J. W.,	*Los Angeles*	9
Newton, W. C.,	*San Diego*	21
Nicholas, C. Z.,	*Santa Barbara*	26
Nichols, J. N.,	*Los Angeles*	9
Nichols, R. E.,	*Woodland*	38
Nichols, R. C.,	*Ontario*	20
Nicholson, J. W.,	*Porterville*	35
Nicholson, J.,	*Los Angeles*	9
Nicholson, R. M.,	*Los Angeles*	9
Nicola, T. C.,	*Montebello*	9
Nicoll, J. R. P.,	*Santa Ana*	15
Niebel, H. L.,	*Palo Alto*	27
Niebergall, H. A.,	*Los Angeles*	9
Nielsen, H. W.,	*Fowler*	4
Nielsen, J. C. E.,	*San Diego*	21
Nielsen, J. W.,	*San Luis Obispo*	24
Nielsen, J. M.,	*Los Angeles*	9
Nielsen, L. R.,	*Fresno*	4
Nielson, M. M.,	*Los Angeles*	9
Niemand, F. G.,	*San Francisco*	22
Nies, C. A.,	*Los Angeles*	9
Nippert, E. F.,	*Los Angeles*	9
Nisbet, T. W.,	*Pasadena*	9
Nittler, A. N.,	*Santa Cruz*	28
Nixon, A. C.,	*Hollywood*	9
Nixon, C. E.,	*Fresno*	4
Nixon, N. K.,	*Los Angeles*	9
Noall, E. T.,	*Santa Rosa*	32
Noble, B. E.,	*Los Angeles*	9
Noble, T. E.,	*Long Beach*	9
Noel, M. S.,	*San Francisco*	22
Noetling, P. R.,	*Angels Camp*	23
Nolan, O. F.,	*San Francisco*	22
Nolan, T. J.,	*San Francisco*	22
Norman, G. F.,	*Eureka*	5
Norris, C. E.,	*Eureka*	5
Norris, W. J.,	*Los Angeles*	9
Northrop, R. S.,	*Napa*	14
Norton, C. W.,	*Los Angeles*	9
Norton, F. L.,	*Los Angeles*	9
Nuttall, J. P.,	*Santa Monica*	9
Nutting, F. J.,	*Santa Monica*	9
Nutting, R. J.,	*Oakland*	1
Nuzum, F. R.,	*Santa Barbara*	26

O

Oakleaf, D. C.,	*Cloverdale*	32
Oatman, H. C.,	*San Diego*	21
Oatman, H. C., Jr.,	*San Diego*	21
O'Brien, H. J.,	*Los Angeles*	9
O'Brien, J. W.,	*Sacramento*	18
O'Brien, J. J.,	*Los Angeles*	9
O'Connor, G. B.,	*San Francisco*	22
O'Connor, J. H.,	*San Francisco*	22
O'Connor, R. E.,	*Los Angeles*	9
O'Connor, R. P.,	*Oakland*	1
O'Connor, T. C., Jr.,	*Murphy*	23
O'Connor, T. H.,	*San Francisco*	22
O'Donnell, E. W.,	*Los Angeles*	9
O'Donnell, F. J.,	*Stockton*	23
Oechsli, W. R.,	*Olive View*	9
Offield, A. L.,	*Burlingame*	25
Ogden, R. A.,	*Hollywood*	9
O'Grady, W. E.,	*San Francisco*	22
Ohannesian, F.,	*Sacramento*	18
Ohanneson, J.,	*Alameda*	1
O'Hara F. P.,	*San Diego*	21
O'Hara, J. J.,	*San Diego*	21
Ohnemuller, C. E.,	*Los Angeles*	9
Okonogi, B.,	*Fresno*	4
Oldenbourg, L. A.,	*Berkeley*	1
Olberg, F. H.,	*Redding*	29
Olds, W. H.,	*Los Angeles*	9
Oliver, H. R.,	*San Francisco*	22
Oliver, J. A.,	*San Francisco*	22
Oliver, W. A.,	*San Francisco*	25
Olmsted, R. C.,	*Pasadena*	9
Olsen, C. W.,	*Los Angeles*	9
Olsen, D. M. R.,	*Berkeley*	1
Olsen, E. R.,	*San Francisco*	22
Olsen, R. S.,	*Los Angeles*	9
Olsen, S.,	*San Francisco*	22
Olsen, X.,	*San Bernardino*	20
Olson, G. M.,	*Los Angeles*	9
Olson, G. W.,	*Fullerton*	15
Omelvena, J. G.,	*San Diego*	21
O'Neal, R. M.,	*Santa Monica*	9
O'Neil, F. H.,	*San Clemente*	15
O'Neill, B. J., Jr.,	*San Diego*	21
O'Neill, J. R.,	*San Francisco*	22
Onesti, S. J.,	*San Francisco*	22
Opdyke, R.,	*Beverly Hills*	9
Ophüls, W.,	*San Francisco*	22
Oppenheimer, L. I.,	*Oakland*	1
Orbison, T. J.,	*Los Angeles*	9
Orcutt, A. H.,	*Oakland*	1
O'Reilly, B. C. N.,	*San Francisco*	22
Orella, F. R.,	*San Francisco*	22
Orme, R. E.,	*San Francisco*	22
Ormsby, E. A.,	*Centerville*	1
Orr, J.,	*Oakland*	1
Orsborn, E. V.,	*Fairfax*	22
Osborn, H. B.,	*Fillmore*	37
Osborne, A. E.,	*Los Gatos*	27
Osborne, C. J.,	*San Diego*	21
Osborne, R. H.,	*Los Angeles*	9
Osburn, J. N. N.,	*Los Angeles*	9
Ostroff, R. A.,	*San Francisco*	22
Otis, M. R.,	*Los Angeles*	9
Otis, N. M.,	*Santa Monica*	9
O'Toole, C. S.,	*Anaheim*	15
Ottinger, M. R.,	*San Francisco*	22
Otto, F. W.,	*Los Angeles*	9
Overstreet, L. J.,	*San Francisco*	22
Oviedo, G. F.,	*San Francisco*	22
Oviedo, L. J.,	*San Francisco*	22
Owen, C. S.,	*National City*	21
Owen, C. C.,	*San Bernardino*	20
Owen, E. D.,	*San Francisco*	22
Owen, G. R.,	*Los Angeles*	9
Owens, R. L.,	*Lodi*	23
Owens, W. R.,	*Glendale*	9
Oyler, J. D.,	*Los Angeles*	9

P

Pace, P. T.,	*San Jose*	27
Packard, L. A.,	*Bakersfield*	7
Padden, E. H.,	*Oakland*	1
Paez, J.,	*San Diego*	21
Page, B. H.,	*San Mateo*	25
Page, C. W.,	*Berkeley*	1
Page, P. F., Jr.,	*Taft*	7
Page, W. E.,	*Oakland*	1
Pahl, P. C. H.,	*Los Angeles*	9
Paige, G. A.,	*Anaheim*	15
Paine, N. C.,	*Glendale*	9
Palamountain, W. B.,	*Oakland*	1
Pallais, A.,	*Los Angeles*	9
Pallette, E. M.,	*Los Angeles*	9
Palmer, B. M.,	*Oakland*	1
Palmer, B.,	*Santa Monica*	9
Palmer, C. B.,	*San Francisco*	22
Palmer, E. O.,	*Hollywood*	9
Palmer, R. S.,	*Pomona*	9
Palmer, W. B.,	*Long Beach*	9
Parish, H. L.,	*Oakland*	1
Parizek, F. J.,	*Los Angeles*	9
Park, D. B.,	*Vallejo*	31
Parker, A. S.,	*Merced*	12
Parker, C. H.,	*Pasadena*	9
Parker, F. B.,	*Oakland*	1
Parker, G.,	*Salinas*	13
Parker, H. R.,	*Oakland*	1
Parker, J. A.,	*Merced*	12
Parker, J. T.,	*Oakland*	1
Parker, J. L.,	*Brawley*	6
Parker, J. A.,	*Los Angeles*	9
Parker, L. O.,	*San Francisco*	22
Parker, T. A.,	*La Jolla*	21
Parker, W. B.,	*Los Angeles*	9
Parkin, V.,	*Los Angeles*	9
Parkinson, R. H.,	*San Francisco*	22
Parkinson, S. N.,	*Oakland*	1
Parkinson, W. B.,	*Tulare*	35
Parks, B. K.,	*Long Beach*	9
Parks, F. R.,	*Los Angeles*	9
Parks, J. A.,	*San Diego*	21
Parowski, S. A.,	*San Diego*	21
Parrish, G.,	*Los Angeles*	9
Parrott, J. C.,	*San Francisco*	22
Parsegan, J. H.,	*San Francisco*	22
Parsons, E. W.,	*San Francisco*	22
Parsons, H. H.,	*San Bernardino*	20
Parsons, J. J.,	*Monrovia*	9
Parsons, L.,	*Los Angeles*	9
Parsons, S. R.,	*Los Angeles*	9
Pasette, S. E.,	*Los Angeles*	9
Patek, S. D.,	*San Francisco*	22
Paterson, F. H.,	*Santa Ana*	15
Patrick, M. A.,	*Los Angeles*	9
Patterson, E. A.,	*Oakland*	1
Patterson, G. H.,	*Los Angeles*	9
Patterson, G. L.,	*Santa Rosa*	32
Patterson, J. A.,	*San Bernardino*	20
Patton, E. F.,	*Los Angeles*	9
Patton, R. F.,	*Los Angeles*	9
Paul, J. W.,	*Santa Clara*	27
Paull, R. A.,	*La Jolla*	21
Paup, M. K.,	*Corona*	17
Paxman, D. G.,	*Oakland*	1
Payton, W. B.,	*Riverside*	17
Pchelkin, N. A.,	*San Francisco*	22
Pearce, C. M.,	*Oakland*	1
Pearce, W. M.,	*Wilmington*	9
Pearl, F. L.,	*San Francisco*	22
Pearl, F. A.,	*Los Angeles*	9
Pearson, C. A.,	*Turlock*	33
Pearson, E. A.,	*Los Angeles*	9
Pearson, R. G.,	*Sacramento*	18
Peddicord, H.,	*Redwood City*	25
Peers, R. A.,	*Colfax*	16
Peers, R. S.,	*Oakland*	1
Peery, L. T.,	*Berkeley*	1
Peirsol, E. C.,	*Claremont*	9
Pelkan, K. F.,	*San Jose*	27
Peluso, J. D.,	*Los Angeles*	9
Pendergrass, C. I.,	*Clovis*	4
Pendergrass, J. E.,	*Clovis*	4
Pendleton, W.,	*Los Angeles*	9
Peoples, S. Z.,	*Petaluma*	32
Peppers, C. H.,	*Los Angeles*	9
Percy, J. F.,	*Los Angeles*	9
Perkins, A.,	*Oakland*	1
Perkins, S. F.,	*Los Angeles*	9
Perkins, W. A.,	*Oakland*	1
Perry, C. G.,	*Sausalito*	10
Perry, J. R.,	*West Hollywood*	9
Perry, O. H.,	*Marysville*	39
Perzik, S. L.,	*Los Angeles*	9
Petch, P. H.,	*Oakland*	1
Peters, C. E.,	*Oakland*	1
Peters, C.,	*San Francisco*	22
Peters, H. E.,	*Pittsburg*	3
Peters, L.,	*Alameda*	1
Petersen, D.,	*Behar, India*	4
Petersen, H. E.,	*San Fernando*	9
Petersen, H. C.,	*Stockton*	23
Peterson, A. A.,	*Los Angeles*	9
Peterson, A.,	*Los Angeles*	9
Peterson, E. A.,	*Vallejo*	31
Peterson, F. W.,	*El Centro*	6
Peterson, W. W.,	*San Francisco*	8
Petr, F.,	*Turlock*	33
Petter, R. S.,	*Los Angeles*	9
Pettis, J. H.,	*Fresno*	4
Pettit, A. V.,	*San Francisco*	22
Pettler, S. H.,	*Los Angeles*	9
Petty, C. O.,	*Fullerton*	15
Pflueger, O. H.,	*San Francisco*	22
Phelan, C. A.,	*San Francisco*	22
Phillips, A. D.,	*Sacramento*	18
Phillips, A. L.,	*Santa Cruz*	28
Phillips, C. E.,	*Los Angeles*	9
Phillips, L. F. E.,	*Palo Alto*	27
Phillips, P. T.,	*Santa Cruz*	28
Phillips, W. A.,	*Ben Lomond*	28
Philp, W. S.,	*Los Angeles*	9
Pickard, R. J.,	*San Diego*	21
Pidcock, J. W.,	*Hollywood*	9
Pier, H. McK.,	*Oakland*	1
Pierce, G. W.,	*San Francisco*	22
Pierce, H. M.,	*Riverside*	17
Pierce, H. F.,	*Santa Barbara*	26
Pierce, S. N.,	*Los Angeles*	9
Pierson, P. H.,	*San Francisco*	22
Pillsbury, S. G.,	*Long Beach*	9
Pimental, G. B.,	*Los Banos*	12
Pindell, M. L.,	*Los Angeles*	9
Pindler, L. A.,	*Los Angeles*	9
Piness, G.,	*Los Angeles*	9
Pinkham, C. B.,	*San Francisco*	22
Pinkley, V. M.,	*San Bernardino*	20
Pinney, I.,	*Stockton*	23
Piper, H. E.,	*Santa Cruz*	28
Pischel, D. K.,	*San Francisco*	22
Pischel, K.,	*San Francisco*	22
Piscitelli, A. M.,	*San Francisco*	22
Pitkin, H. C.,	*San Francisco*	22
Pitts, E. H.,	*Sacramento*	18
Pius, C.,	*Yreka*	30
Plane, J. F.,	*Long Beach*	9
Plank, T. H.,	*San Francisco*	22
Plath, H. W.,	*Oakland*	1
Platt, J. E.,	*Pasadena*	9

NAME	COUNTY	COUNTY SOCIETY NO.
Player, L. P.,	*San Francisco*	22
Pleth, V.,	*Santa Rosa*	32
Plimpton, E. B.,	*Los Angeles*	9
Plymire, D. B.,	*San Francisco*	22
Poage, C. A.,	*Colusa*	38
Podstata, V. H.,	*San Francisco*	1
Poheim, J. F.,	*San Francisco*	22
Polesky, F. A.,	*Los Angeles*	9
Poley, C. W.,	*Los Angeles*	9
Pollia, J. A.,	*Los Angeles*	9
Pollock, W. E.,	*Sacramento*	18
Pomeroy, G. T.,	*Burbank*	9
Pomeroy, J. L.,	*Los Angeles*	9
Poole, R. E.,	*Yountville*	14
Pope, E. W.,	*San Francisco*	22
Pope, F. S.,	*Santa Ana*	15
Pope, S. T., II,	*San Francisco*	22
Pope, W. H.,	*Sacramento*	18
Porter, C. C.,	*San Francisco*	22
Porter, E. E.,	*San Jose*	27
Porter, E. B.,	*Coronado*	21
Porter, G. S.,	*Los Angeles*	9
Porter, J. A.,	*Modesto*	33
Porter, R. L.,	*San Francisco*	22
Porter, W. S.,	*Oakland*	1
Post, J. O.,	*Los Angeles*	9
Pottenger, F. M.,	*Monrovia*	9
Pottenger, F. M., Jr.,	*Monrovia*	9
Pottenger, J. E.,	*Monrovia*	9
Pottenger, R. T.,	*Monrovia*	9
Potter, C. D.,	*San Francisco*	22
Potter, G.,	*Oakland*	1
Potter, M. J. M.,	*San Diego*	21
Potter, P. S.,	*Berkeley*	1
Potter, W. H.,	*San Diego*	21
Potts, J. E.,	*Los Angeles*	9
Pouppirt, P. S.,	*San Francisco*	22
Powell, A.,	*Oakland*	1
Powell, B. J.,	*Stockton*	23
Powell, B. J., Jr.,	*Stockton*	23
Powell, D. R.,	*Stockton*	23
Powell, R. C.,	*Richmond*	3
Powers, A. R.,	*Tracy*	23
Powers, H. J.,	*Fresno*	9
Powers, R. A.,	*Palo Alto*	27
Pratt, B. H.,	*Lemoore*	4
Pratt, E. D.,	*Burbank*	9
Pratt, M. D.,	*Fall River Mills*	29
Pratt, O. B.,	*Los Angeles*	9
Pratt, T. R.,	*Ahwahnee*	12
Premo, M. A.,	*San Jose*	27
Presler, H. M.,	*San Diego*	21
Pressley, J. F.,	*San Francisco*	22
Preston, A. W.,	*Visalia*	35
Preuss, C. A.,	*Santa Barbara*	26
Price, C. R.,	*Los Angeles*	9
Price, J. B. M.,	*Orange*	15
Prien, R. H.,	*Gilroy*	27
Priestley, S. F.,	*Stockton*	23
Priestley, W. F.,	*Oakland*	1
Primasing, R. J.,	*Courtland*	18
Prince, L. D.,	*San Francisco*	22
Prince, R. W.,	*San Bernardino*	20
Prindle, K. H.,	*San Mateo*	25
Pritchard, F. H.,	*Colton*	20
Pritchard, J. L.,	*San Jose*	27
Pritchard, W. F.,	*San Bernardino*	20
Probasco, H. G.,	*Los Angeles*	9
Proescher, F.,	*San Jose*	27
Profant, H. J.,	*Santa Barbara*	26
Proudfoot, C. P.,	*San Luis Obispo*	24
Pruett, H. J.,	*San Francisco*	22
Pruett, J. F.,	*San Francisco*	22
Pruett, W. C.,	*Oakland*	1
Pryor, H. B.,	*San Francisco*	27
Pulford, D. S.,	*Sacramento*	38
Purcell, R.,	*Los Angeles*	9
Purlenky, G. P.,	*Arcata*	5
Pursell, F. J.,	*Los Angeles*	9
Putnam, H. A.,	*Monrovia*	9

Q

Quaintance, P. A.,	*Los Angeles*	9
Queirolo, C. A.,	*Oakland*	1
Quimby, S. A.,	*Madera*	4
Quinan, C.,	*San Francisco*	22
Quinlan, C. M.,	*San Francisco*	22
Quinlan, J. F.,	*San Francisco*	22
Quinn, T. D'A.,	*San Francisco*	22
Quinn, V. J.,	*Los Angeles*	9
Quinn, W.,	*San Francisco*	22
Quinn, W. J.,	*Eureka*	5
Quinn, W. R.,	*Blue Springs, Mo.*	9
Quint, S. J.,	*Los Angeles*	9

R

Rabinowitz, R.,	*San Francisco*	22
Rabwin, M. H.,	*Los Angeles*	9
Radford, E. B.,	*Weimar*	16
Raffetto, J. J.,	*San Francisco*	22
Ragan, S. T.,	*Hollywood*	9
Railsback, O. C.,	*Woodland*	38
Raitt, G. E.,	*Santa Ana*	15
Rajotte, E. C. F.,	*San Francisco*	22
Rakitin, S. S.,	*San Francisco*	22
Rambo, W. H.,	*Los Angeles*	9
Rammelt, W.,	*Los Angeles*	9
Ramsay, R. E.,	*Pasadena*	9
Rand, C. W.,	*Los Angeles*	9
Randall, S. B.,	*Santa Cruz*	28
Randel, H. A.,	*Fresno*	4
Rankin, A. H.,	*San Francisco*	22
Rankin, E. P.,	*Berkeley*	1
Rankin, T. J.,	*San Diego*	20
Ransom, D. H.,	*Madera*	4
Ransom, J. K.,	*Modesto*	33
Ranson, J. R.,	*San Luis Obispo*	24
Rapaport, H.,	*Los Angeles*	9
Rapaport, W.,	*Oakland*	1
Rasor, C.,	*Oakland*	1
Rathbone, R. H.,	*Los Angeles*	9
Rathbun, W. T.,	*Colusa*	38
Ratliff, H. L.,	*Riverside*	17
Ratner, R.,	*San Francisco*	22
Ratty, F. J.,	*San Diego*	21
Raulston, B. O.,	*Los Angeles*	9
Rawhauser, J. L.,	*Willows*	38
Rawlins, A. G.,	*San Francisco*	22
Ray, E. B.,	*Bellflower*	9
Ray, F. S.,	*Los Angeles*	9
Ray, H. H.,	*San Mateo*	25
Ray, L.,	*Santa Rosa*	32
Rea, B. J.,	*Sacramento*	18
Rea, R. R.,	*Los Angeles*	9
Rea, S. L.,	*Ukiah*	11
Rea, T.,	*Berkeley*	30
Read, F. T.,	*Glendale*	9
Read, J. M.,	*San Francisco*	22
Ready, F. L.,	*Los Angeles*	9
Ream, M. P.,	*San Leandro*	1
Reamer, E. F.,	*Modesto*	33
Reardon, F. B.,	*Sacramento*	18
Reasner, W. F.,	*Santa Monica*	9
Rebec, W. G.,	*Belmont*	25
Reckers, W. A.,	*Placerville*	18
Redelings, L. H.,	*San Diego*	21
Redewill, F. H.,	*San Francisco*	22
Reed, A. C.,	*San Francisco*	22
Reed, C. C.,	*Hynes*	9
Reed, E. N.,	*Santa Monica*	9
Reed, J. R.,	*Pasadena*	9
Reed, W. J.,	*Redlands*	20
Reeng, J. D.,	*San Francisco*	22
Rees, C. W.,	*San Diego*	21
Rees, C. E.,	*San Diego*	21
Rees, D. M.,	*Monterey Park*	9
Rees, H. C.,	*Los Angeles*	9
Reeves, E. W.,	*Salinas*	13
Reeves, J. M.,	*Oakland*	1
Reeves, J. W.,	*Los Angeles*	9
Reeves, W. R.,	*Salinas*	13
Regan, L. J.,	*Hollywood*	9
Rehfisch, J. M.,	*San Francisco*	22
Reich, W. W.,	*Berkeley*	1
Reiche, C.,	*Los Angeles*	9
Reichert, F. L.,	*San Francisco*	22
Reichle, P. A.,	*Hollywood*	9
Reid, R. S.,	*Oceanside*	21
Reilly, P. H.,	*Vallejo*	31
Reilly, W.,	*San Francisco*	22
Reilly, W. A.,	*San Francisco*	22
Reina, S.,	*Los Angeles*	9
Reinard, L.,	*Los Angeles*	9
Reinertsen, B. R.,	*Los Angeles*	9
Reinle, G. G.,	*Oakland*	1
Reinstein, A. H.,	*San Francisco*	22
Reis, A. G. DeS.,	*Oakland*	1
Reische, A. E.,	*Oakland*	1
Reiser, S. M.,	*Los Angeles*	9
Reiss, O.,	*Los Angeles*	9
Reiswig, A. H.,	*Loma Linda*	20
Reitzel, R. J.,	*Burlingame*	25
Remaly, C. E.,	*Los Angeles*	9
Remington, L. D.,	*Monrovia*	9
Remmel, A. J.,	*San Francisco*	22
Remmen, E. T.,	*Glendale*	9
Renz, C.,	*San Francisco*	22
Ress, I. L.,	*Los Angeles*	9
Rethwilm, L. A.,	*San Francisco*	22
Reud, W. R.,	*Oakland*	1
Rey, H. F.,	*Oxnard*	37
Reynolds, C. E.,	*Los Angeles*	9
Reynolds, H. C.,	*Arlington*	17
Reynolds, L. R.,	*San Francisco*	22
Reynolds, L. G.,	*Los Angeles*	9
Reynolds, P. A.,	*Los Angeles*	9
Reynolds, R. A.,	*San Francisco*	22
Reynolds, R. G. Jr.,	*Palo Alto*	27
Reynolds, R. W.,	*Pasadena*	9
Reynolds, T. E.,	*Oakland*	1
Rhodes, F. A.,	*Culver City*	9
Rhodes, G. C.,	*San Francisco*	22
Riach, M. T.,	*San Diego*	21
Rice, C. H.,	*Oakland*	1
Rice, F. M.,	*San Francisco*	22
Rich, T. C.,	*Los Angeles*	9
Richards, C. M.,	*San Jose*	27
Richards, D. N.,	*Oakland*	1
Richards, R. L.,	*Santa Barbara*	26
Richards, S. B.,	*San Bernardino*	20
Richter, C.,	*Balboa Beach*	15
Richter, I. M.,	*Santa Barbara*	26
Rickabaugh, H. B.,	*Alhambra*	9
Rickard, J. F.,	*San Francisco*	22
Rickmond, A. E.,	*Oakland*	1
Rigdon, R. L.,	*San Francisco*	22
Riggin, L. L.,	*Pasadena*	9
Righetti, H.,	*San Francisco*	22
Rindlaub, J. H.,	*Fargo North Dakota*	9
Ring, O. A.,	*San Francisco*	22
Rinkenberger, F. W.,	*Los Angeles*	9
Rinne, F. A.,	*San Francisco*	22
Risley, E. H.,	*Loma Linda*	20
Rixford, E.,	*San Francisco*	22
Rixford, H. C.,	*Mountain Home, Idaho*	22
Roath, C.,	*Los Angeles*	9
Robarts, H. P.,	*San Francisco*	22
Robbins, A. C.,	*Garden Grove*	15
Robbins, A. R.,	*Los Angeles*	9
Robbins, B.,	*Hanford*	4
Robbins, D. R.,	*Los Angeles*	9
Roberg, D. N.,	*San Jose*	27
Roberts, A. M.,	*Los Angeles*	9
Roberts, E. K.,	*Los Angeles*	9
Roberts, G. W.,	*Oakland*	1
Roberts, J. G.,	*Pomona*	9
Roberts, J. M.,	*Los Angeles*	9
Roberts, W. H.,	*Pasadena*	9
Robertson, D. L.,	*Modesto*	33
Robertson, G.,	*San Francisco*	22
Robertson, H. M.,	*Santa Ana*	15
Robertson, H. P.,	*Los Angeles*	9
Robertson, J. C.,	*Modesto*	33
Robertson, J. W., Jr.,	*Livermore*	1
Robinson, J.,	*Anaheim*	15
Robinson, J. H.,	*Los Angeles*	9
Robinson, L. L.,	*Larkspur*	10
Robinson, S. P.,	*Santa Barbara*	26
Robinson, S. S.,	*Los Angeles*	9
Roblee, W. W.,	*Riverside*	17
Rodenbaugh, F. H.,	*San Francisco*	22
Rodin, F. H.,	*San Francisco*	22
Roe, J. N.,	*Riverside*	17
Roen, P. B.,	*Hollywood*	9
Roger, J. H. D.,	*San Francisco*	22
Rogers, A. M.,	*Los Angeles*	9
Rogers, F. L.,	*Long Beach*	9
Rogers, H. S.,	*Petaluma*	32
Rogers, H.,	*Oakland*	1
Rogers, H.,	*Bakersfield*	7
Rogers, J. B.,	*Imola*	14
Rogers, J. B.,	*Los Angeles*	9
Rogers, J. D.,	*Los Angeles*	9
Rogers, L. B.,	*Los Angeles*	9
Rogers, L. E.,	*Los Angeles*	9
Rogers, S.,	*Tulare*	35
Rogers, T. L.,	*Long Beach*	9
Rogers, W. L.,	*San Francisco*	22
Rohlfes, B. J.,	*San Francisco*	22
Rohlfing, R. F.,	*Hawthorne*	9
Rohrbacher, G. H.,	*Stockton*	23
Roller, C. S.,	*Colusa*	38
Rolph, W. D.,	*National City*	21
Roncovieri, A.,	*San Francisco*	22
Rood, V. V.,	*Grass Valley*	16
Rook, C. W.,	*Montrose*	9
Roome, C. T.,	*Santa Barbara*	26
Rooney, C. E.,	*Santa Monica*	9
Rooney, H. M.,	*Los Angeles*	9
Roos, A. R.,	*Loma Linda*	20
Roos, D. D.,	*Corona*	17
Root, P. N.,	*Bakersfield*	7
Root, R. R.,	*Corona*	17
Rosanoff, A. J.,	*Los Angeles*	9
Rosasco, O. L.,	*Saratoga*	27
Rosburg, A. H.,	*San Francisco*	22
Roscoe, A. M.,	*Newman*	33
Rose, C. M.,	*Los Angeles*	9
Rose, H. de W.,	*Sonora*	36
Rose, J. T.,	*Healdsburg*	32
Rose, L. M.,	*Santa Clara*	27
Rosenberger, H. G.,	*Whittier*	9
Rosenblum, D. H.,	*Los Angeles*	9
Rosenblum, H. H.,	*San Francisco*	22
Rosencrantz, E.,	*San Francisco*	22
Rosenfeld, M. H.,	*Los Angeles*	9
Rosenkranz, H. A.,	*Los Angeles*	9
Rosenthal, A. G.,	*San Francisco*	22
Ross, A.,	*Los Angeles*	9
Ross, D. E.,	*Los Angeles*	9
Ross, J. C.,	*Los Angeles*	9
Ross, K. F.,	*Los Angeles*	9
Ross, M. A.,	*Los Angeles*	9
Ross, M. H.,	*Los Angeles*	9
Ross, W. H.,	*Brightwater, N. Y.*	21
Rosson, C. T.,	*Hanford*	4
Rosson, R. W.,	*Tulare*	35
Roth, E. F.,	*Palo Alto*	27
Roth, G. H.,	*Los Angeles*	9
Rothman, P. E.,	*Los Angeles*	9

NAME	COUNTY	COUNTY SOCIETY NO.
Rothschild, M.,	*San Francisco*	22
Rothwell, W. T.,	*Los Angeles*	9
Rover, H. P.,	*Los Angeles*	9
Rowe, A. H.,	*Oakland*	1
Rowe, C. H.,	*Oakland*	1
Rowe, M. J.,	*Norwalk*	9
Rowell, H. N.,	*Berkeley*	1
Rowell, W. A.,	*Crockett*	3
Royer, J. E.,	*Oakland*	1
Royston, E. A.,	*Los Angeles*	9
Rubenstein, I.,	*Los Angeles*	9
Rubin, J. S.,	*Los Angeles*	9
Ruddock, J. C.,	*Los Angeles*	9
Ruddy, L. W.,	*Sacramento*	18
Rude, A. E.,	*Los Angeles*	9
Rue, H. A.,	*Los Angeles*	9
Ruediger, E. H.,	*San Diego*	21
Ruediger, G. F.,	*Pasadena*	9
Rueter, K.,	*Oakland*	1
Ruff, F. R.,	*Fresno*	4
Ruggles, H. E.,	*San Francisco*	22
Rulison, E. T.,	*Sacramento*	18
Rumph, P. E.,	*Orange*	15
Rumwell, M. E.,	*San Francisco*	22
Runckel, G. H.,	*McCloud*	30
Runner, J. F.,	*San Francisco*	22
Rupert, R. R.,	*Oakland*	1
Rusche, C. F.,	*Hollywood*	9
Rush, R. C.,	*San Fernando*	9
Russell, E. L.,	*Santa Ana*	15
Russell, J. A.,	*Auburn*	16
Russell, R.,	*Glendale*	9
Russell, T. G.,	*San Francisco*	22
Russell, W. W.,	*San Diego*	21
Ruth, E. S.,	*Hollywood*	9
Ryan, A. F.,	*Los Angeles*	9
Ryan, A. J.,	*Vallejo*	31
Ryan, C. D.,	*Beverly Hills*	9
Ryan, F. S.,	*San Jose*	27
Ryan, L. R.,	*Santa Barbara*	26
Ryan, R. C.,	*San Francisco*	22
Ryan, W. J.,	*San Diego*	21
Ryder, B. E.,	*Los Angeles*	9
Ryfkogel, H. A. L.,	*San Francisco*	22
Rypins, R. F.,	*San Francisco*	22

S

Sabichi, G. C.,	*Whittier*	9
Safarik, E. S.,	*Los Angeles*	9
Saier, M. H.,	*Palo Alto*	27
Sale, J. J.,	*San Francisco*	22
Salisbury, C. S.,	*Los Angeles*	9
Salomon, E.,	*San Francisco*	22
Salter, N. M.,	*Williams*	38
Salvin, M.,	*Los Angeles*	9
Sample, T. N.,	*Fresno*	4
Sampson, J. J.,	*San Francisco*	22
Sampson, J. P.,	*Santa Monica*	9
Sampson, J. A.,	*Sacramento*	18
Sampson, M. H.,	*Berkeley*	1
Sampson, W. A.,	*San Francisco*	22
Sanders, R. W.,	*Alameda*	1
Sanderson, G. H.,	*Stockton*	23
Sandholt, J. P.,	*Monterey*	13
Sandie, J.,	*Los Angeles*	9
Sands, R. A.,	*Ocean Park*	9
Sands, R. L.,	*Santa Monica*	9
Sanford, J. R.,	*Pasadena*	9
Sanford, P.,	*San Jose*	27
Sansum, W. D.,	*Santa Barbara*	26
Sappington, E. E.,	*San Francisco*	22
Sargent, W. B.,	*San Francisco*	22
Sargent, W. H.,	*Oakland*	1
Sartori, H. J.,	*San Francisco*	22
Sasso, J. A.,	*Los Angeles*	9
Sauer, F. J.,	*Los Angeles*	9
Sauer, F. K.,	*Los Angeles*	9
Saulsberry, C. E.,	*New Brunswick, New Jersey*	15
Saunders, C. E.,	*San Jose*	27
Savage, J. C.,	*Los Angeles*	9
Savage, P. M.,	*San Bernardino*	20
Savage, S. H.,	*Lancaster*	9
Savage, W. W.,	*San Bernardino*	20
Saverien, A. E.,	*Los Angeles*	9
Saylin, G. J.,	*Los Angeles*	9
Saylin, J.,	*Venice*	9
Saylor, B. F.,	*Redding*	29
Scamell, J. W.,	*Oakland*	1
Scanland, J. M.,	*Agnew*	27
Scanlon, W. G.,	*Pasadena*	9
Scarboro, E. R.,	*Fresno*	4
Scarborough, R. A.,	*San Francisco*	22
Scatena, F. N.,	*Sacramento*	18
Schaefer, J. W.,	*Los Angeles*	9
Schaeffer, R. W.,	*Redondo Beach*	9
Schaller, W. F.,	*San Francisco*	22
Shallig, D. W.,	*Sacramento*	18
Schaper, E. A.,	*Keene*	7
Schaupp, K. L.,	*San Francisco*	22
Schefcik, J. F.,	*Los Angeles*	9
Scheier, R. B.,	*San Francisco*	22
Schell, J. P.,	*San Jose*	27
Schenck, G. F.,	*Los Angeles*	9
Scherfee, J. F.,	*Los Angeles*	9
Schiffbauer, H. E.,	*Los Angeles*	9
Schiller, M. M.,	*Los Angeles*	9
Schilling, W.,	*San Francisco*	22
Schiro, S.,	*San Francisco*	22
Schlageter, H. J.,	*San Francisco*	22
Schlappi, J. C.,	*San Diego*	21
Schlotthauer, H. L.,	*Bakersfield*	7
Schlotthauer, M. Q.,	*Bakersfield*	7
Schluter, H. F.,	*Sacramento*	18
Schmelz, C. J.,	*Guerneville*	32
Schmidt, A. E.,	*San Francisco*	22
Schmidt, D. A.,	*Los Angeles*	9
Schmidt, E. J.,	*Fresno*	4
Schmidt, P. E.,	*Glendale*	9
Schmitt, E. O. G.,	*San Jose*	27
Schmitt, H. H.,	*Gilroy*	27
Schmitt, L. S.,	*San Francisco*	22
Schmode, J. M.,	*Los Angeles*	9
Schneider, E. H.,	*Los Angeles*	9
Schoff, C. E.,	*Sacramento*	18
Schofield, R. O.,	*Hobart Mills*	16
Scholl, A. J.,	*Los Angeles*	9
Scholtz, M.,	*Los Angeles*	9
Scholz, A. M.,	*Los Angeles*	9
Schoonmaker, G. D.,	*San Francisco*	22
Schott, H. J.,	*Los Angeles*	9
Schottstaedt, W. E. R.,	*Fresno*	4
Schreiber, F. C.,	*San Francisco*	22
Schreiber, L. W.,	*Santa Monica*	9
Schroeder, F. B.,	*San Diego*	21
Schroeder, L. A.,	*Los Angeles*	9
Schuetz, C. E.,	*Hollywood*	9
Schulman, L. M.,	*Hollywood*	9
Schultz, C. E.,	*Glendale*	9
Schultz, H. H.,	*San Francisco*	22
Schultz, LeR. O.,	*Glendale*	9
Schulz, R. L.,	*Los Angeles*	9
Schulze, M.,	*San Francisco*	22
Schumacher, I. C.,	*San Francisco*	22
Schurmeier, H. L.,	*Santa Barbara*	26
Schurter, M. A.,	*Long Beach*	9
Schussler, H., Jr.,	*San Francisco*	22
Schwalenberg, H. R.,	*Santa Barbara*	26
Schwartz, A. H.,	*Los Angeles*	9
Schwartz, F. L.,	*San Diego*	21
Schwartzman, H.,	*Oakland*	1
Schwarz, J.,	*San Francisco*	22
Schwarz, T. E.,	*Oakland*	1
Schwuchow, W. B.,	*Los Angeles*	9
Sciaroni, G. H.,	*Fresno*	4
Scobee, J. E.,	*Los Angeles*	9
Scoins, W. H.,	*Los Angeles*	9
Scott, A. J., Jr.,	*Los Angeles*	9
Scott, J. W.,	*Colusa*	38
Scott, W. E.,	*San Francisco*	22
Scovel, R. E.,	*San Francisco*	22
Scribner, R. G.,	*Sacramento*	18
Scroggy, J. Q. A.,	*Hollywood*	9
Scudder, J. H.,	*Oakland*	1
Scudder, R.,	*Fort Bragg*	11
Seabolt, G. C.,	*South Pasadena*	9
Seals, P. W.,	*Los Angeles*	9
Searls, H. H.,	*San Francisco*	22
Seaver, H. C.,	*Los Angeles*	9
Seavey, M. A.,	*Sacramento*	18
Seawell, J. W.,	*Healdsburg*	32
Sebastian, C. F.,	*Los Angeles*	9
Sedgwick, V. de M.,	*Long Beach*	9
Seeburt, E. M. P.,	*San Francisco*	22
Seech, S. G.,	*Los Angeles*	9
Seeley, L. J.,	*Fort Jones*	30
Segall, G.,	*Los Angeles*	9
Seiberth, J.,	*Pixley*	35
Seid, M. J.,	*San Francisco*	22
Seiger, H. W.,	*Needles*	20
Seitz, R. P.,	*San Francisco*	22
Seletz, R.,	*Los Angeles*	9
Selfridge, G.,	*San Francisco*	22
Seligman, L. L.,	*Dinuba*	27
Seligman, L. J.,	*Los Angeles*	9
Sellery, A. C.,	*Long Beach*	9
Sellery, C. M.,	*Los Angeles*	9
Sellew, P. K.,	*Los Angeles*	9
Sellon, G. L.,	*Fullerton*	15
Serns, A. E.,	*Santa Barbara*	26
Servin, C.,	*Los Angeles*	9
Settle, F. B.,	*Long Beach*	9
Setzier, G. B.,	*Los Angeles*	9
Sevenman, G. W.,	*San Mateo*	25
Sevier, E.,	*Sacramento*	18
Sewall, E. C.,	*San Francisco*	22
Sexton, C. L.,	*Los Angeles*	9
Seymour, E. C.,	*Olive View*	9
Seymour, J. H.,	*Los Angeles*	9
Shackford, B. C.,	*Long Beach*	9
Shade, M. A.,	*Oakland*	1
Shafer, F. P.,	*Los Angeles*	9
Shafor, H. A.,	*Los Angeles*	9
Shahovitch, G. P.,	*Los Angeles*	9
Shambaugh, N. F.,	*Long Beach*	9
Shank, C. E.,	*Corona*	17
Shanks, F. H.,	*San Francisco*	22
Shannon, J. M.,	*Berkeley*	1
Sharp, J. G.,	*San Francisco*	22
Sharp, R. G.,	*San Diego*	21
Sharpe, O. A.,	*San Francisco*	25
Sharpsteen, J. R.,	*Oakland*	1
Shattinger, C.,	*Los Altos*	27
Shattuc, W. E.,	*Hollywood*	9
Shattuck, H. P.,	*Los Angeles*	9
Shaw, E. B.,	*San Francisco*	22
Shaw, H. N.,	*Los Angeles*	9
Shea, J. J.,	*San Diego*	21
Shea, T. T.,	*San Francisco*	22
Shea, W. E.,	*San Francisco*	22
Sheafe, E. V.,	*Oakland*	1
Sheehy, F. T.,	*San Francisco*	22
Sheets, O. B.,	*Los Angeles*	9
Shelby, D. C.,	*Los Angeles*	9
Sheldon, E. C.,	*Hollister*	19
Sheldon, E. F.,	*Los Angeles*	2
Sheldon, E. A.,	*Bellflower*	9
Sheldon, F. B.,	*Stockton*	23
Sheller, W. O.,	*Culver City*	9
Shelton, E. K.,	*Santa Barbara*	26
Shelton, G. C.,	*Los Angeles*	9
Shenk, F. P.,	*Santa Cruz*	28
Shepard, C. E.,	*Standard University*	27
Shepard, W. P.,	*San Francisco*	22
Shepardson, D. E.,	*San Francisco*	22
Shepardson, H. C.,	*San Francisco*	22
Shephard, J. H.,	*San Jose*	27
Shepherd, H. L.,	*Los Angeles*	9
Sherman, B. H.,	*Hollywood*	9
Sherman, J.,	*San Francisco*	22
Sherman, R. S.,	*San Francisco*	22
Sherrard, E. E.,	*Los Angeles*	9
Sherrick, J. W.,	*Oakland*	1
Sherril, J. W.,	*La Jolla*	21
Sherry, L. B.,	*Pasadena*	9
Sherwood, O. W.,	*Westport*	11
Schickle, C.,	*Los Angeles*	9
Shidler, G. P.,	*Torrance*	9
Shields, L.,	*Oakland*	1
Shiels, G. F.,	*Redwood City*	25
Shier, C. W.,	*Arcadia*	9
Shilling, J. W.,	*Los Angeles*	9
Shipley, R. E.,	*Los Angeles*	9
Shipley, W. C.,	*Santa Rosa*	32
Shipman, O. F.,	*Los Angeles*	9
Shipman, S. J.,	*San Francisco*	22
Shippey, R. H.,	*Long Beach*	9
Shirey, C. W.,	*North Hollywood*	9
Shirk, F. M.,	*La Verne*	9
Shively, E. M.,	*Ventura*	37
Shoemaker, H.,	*Los Angeles*	9
Shook, F. M.,	*Oakland*	1
Shore, F. A.,	*Ventura*	37
Shorkley, T. M.,	*Carpinteria*	26
Shotwell, C. L.,	*Los Angeles*	9
Shreck, J. A.,	*Redlands*	20
Shryock, A.,	*Loma Linda*	20
Shuck, C. H.,	*Fresno*	4
Shufelt, A. A.,	*San Jose*	27
Shulman, L.,	*Los Angeles*	9
Shultz, E. L.,	*Los Angeles*	9
Shumaker, E. K.,	*Los Angeles*	9
Shuman, J. W.,	*Los Angeles*	9
Shuman, J. R.,	*Los Angeles*	9
Shumate, F. O.,	*San Francisco*	22
Shumate, T. E.,	*San Francisco*	22
Shutes, M. H.,	*Oakland*	1
Siebe, E. V.,	*San Francisco*	22
Siebert, A. A.,	*Oakland*	1
Siefert, A. C.,	*Oakland*	1
Siegmund, F. W.,	*Los Angeles*	9
Sigworth, D. C.,	*Long Beach*	9
Silverman, D. J.,	*Los Angeles*	9
Silverthorn, F. R.,	*Los Angeles*	9
Simon, E. G.,	*Oakland*	1
Simon, M. E.,	*San Francisco*	22
Simonds, P. E.,	*Riverside*	17
Simpson, B. R.,	*San Diego*	21
Simpson, J. A.,	*San Francisco*	22
Singer, H.,	*Los Angeles*	9
Sink, W. D.,	*Santa Maria*	26
Sippy, J. J.,	*Stockton*	23
Sirbu, A. B.,	*San Francisco*	22
Sirmay, E. A.,	*Los Angeles*	9
Sisson, C. E.,	*San Diego*	21
Sisson, M.,	*Oakland*	1
Skaff, J. E.,	*San Francisco*	22
Skeel, D. W.,	*Los Angeles*	22
Skillen, J.,	*Olive View*	9
Skilling, L. E.,	*Alameda*	1
Slaughter, H. C.,	*Los Angeles*	9
Slavich, J. F.,	*Oakland*	1
Sleeper, K. R.,	*Los Angeles*	9
Slemons, J. M.,	*Los Angeles*	9
Sloan, L. E.,	*Inglewood*	9
Sloan, L. N.,	*Yuba City*	39
Sloan, O. J.,	*Glendale*	9
Sloane, L. O.,	*Los Angeles*	9
Smale, G. A.,	*Los Angeles*	9
Small, C. K.,	*Oakland*	1
Smalley, R. B.,	*Willits*	11

NAME	COUNTY	COUNTY SOCIETY NO.
Smallwood, W. C.,	*Long Beach*	9
Smart, E. P.,	*Olive View*	9
Smiley, H. W.,	*Indio*	17
Smiley, K. E.,	*Los Angeles*	9
Smiley, R. S.,	*San Diego*	21
Smitgen, P. H.,	*Los Angeles*	9
Smith, A. S. J.,	*San Jose*	27
Smith, A. B.,	*La Jolla*	21
Smith, A. E.,	*Los Angeles*	9
Smith, A. M.,	*Oakland*	1
Smith, B.,	*Los Angeles*	9
Smith, C. L.,	*Maywood*	9
Smith, C. E.,	*San Francisco*	22
Smith, D. V.,	*Long Beach*	9
Smith, D. A.,	*Oakland*	1
Smith, E. D.,	*Santa Barbara*	26
Smith, E. G.,	*Oakland*	1
Smith, E. W.,	*San Francisco*	22
Smith, F. H.,	*San Bruno*	25
Smith, G. F.,	*Los Angeles*	9
Smith, H. L.,	*Fair Oaks*	18
Smith, H. H.,	*Los Angeles*	9
Smith, H. A.,	*Whittier*	9
Smith, H. J.,	*Oakland*	1
Smith, H.,	*Los Angeles*	9
Smith, H. MacV.,	*Santa Ana*	15
Smith, H. G.,	*San Francisco*	22
Smith, J. J.,	*San Francisco*	22
Smith, J. L.,	*Los Angeles*	9
Smith, J. K.,	*Bakersfield*	7
Smith, K. B.,	*Oakland*	1
Smith, L. A.,	*San Francisco*	22
Smith, L. W.,	*Los Angeles*	9
Smith, L. E.,	*Hollister*	19
Smith, L. E.,	*San Bernardino*	20
Smith, M. H.,	*Hollywood*	9
Smith, M.,	*Los Angeles*	9
Smith, N. R.,	*Monterey Park*	9
Smith, R. M.,	*Riverside*	17
Smith, R. T.,	*Pomona*	9
Smith, R.,	*Los Angeles*	9
Smith, R. K.,	*San Francisco*	22
Smith, R. D.,	*Pomona*	9
Smith, R. C.,	*Hollywood*	9
Smith, R. L.,	*Pomona*	9
Smith, R. L. I.,	*Pasadena*	9
Smith, R. N.,	*Hollywood*	9
Smith, R. D.,	*San Pedro*	9
Smith, S.,	*Pasadena*	9
Smith, S. K.,	*Oakland*	1
Smith, W. B.,	*Los Angeles*	9
Smith, W. B.,	*San Francisco*	22
Smith, W.,	*Los Angeles*	1
Smith, W. R.,	*Delano*	7
Smither, J. A.,	*Tracy*	23
Smithies, H. R.,	*Alameda*	
Smolt, C. A.,	*Ventura*	37
Smolt, L. P.,	*Ventura*	37
Smylie, R. S.,	*San Diego*	21
Smyth, F. S.,	*San Francisco*	22
Smyth, M. H.,	*Stockton*	23
Smythe, H.,	*Stockton*	23
Sneden, C. M.,	*Long Beach*	9
Snoddy, C. A.,	*Vallejo*	31
Snow, W. F.,	*New York, N. Y.*	27
Snure, H.,	*Los Angeles*	9
Snyder, C. C.,	*Pasadena*	9
Snyder, G. A.,	*W. Los Angeles*	9
Snyder, G. S.,	*San Francisco*	22
Sobey, G. L.,	*Paso Robles*	24
Sogemeier, E.,	*San Mateo*	25
Sohler, F. E.,	*Healdsburg*	32
Soiland, A.,	*Los Angeles*	9
Solomon, J. C.,	*Los Angeles*	9
Somerfield, E.,	*Los Angeles*	9
Somerfield, H. A.,	*San Francisco*	22
Sonnenberg, A.,	*San Francisco*	22
Sooy, D. W.,	*San Francisco*	22
Sooy, J. W.,	*San Francisco*	22
Soper, H. V.,	*Los Angeles*	9
Sornsen, A. A.,	*Los Angeles*	9
Sosnowski, K. C.,	*Long Beach*	9
Soto-Hall, R.,	*San Francisco*	22
Soutar, R. G.,	*Sacramento*	18
Spalding, A. B.,	*San Francisco*	22
Spalding, C. H.,	*Richmond*	3
Spalding, J. B.,	*Richmond*	3
Spalding, R. B.,	*San Francisco*	22
Spaulding, A. Q.,	*Santa Barbara*	26
Spaulding, J. M.,	*Los Angeles*	9
Spear, E. B.,	*Los Angeles*	9
Spear, J. L.,	*Santa Rosa*	32
Speer, G. G.,	*Los Angeles*	9
Speik, F. A.,	*Los Angeles*	9
Spencer, G. A.,	*Sacramento*	18
Spencer, R. M.,	*Los Angeles*	9
Sperling, S. N.,	*Los Angeles*	9
Sperry, J. A.,	*San Francisco*	22
Spiers, H. W.,	*Los Angeles*	9
Spiro, H.,	*San Francisco*	22
Sprague, F. M.,	*Fresno*	4
Sprague, G. T.,	*Van Nuys*	9
Sprauer, V. J.,	*Los Angeles*	9
Spriggs, G. A.,	*San Francisco*	22
Staatz, A. D.,	*Olive View*	9
Stabel, F.,	*Redding*	29
Stabel, J. A.,	*Sacramento*	18
Stadfield, C. G.,	*Hollywood*	9
Stadlinger, K. P.,	*Burbank*	9
Stadtherr, E. F.,	*San Francisco*	22
Stadtmuller, E. S.,	*San Francisco*	22
Stafford, D. D.,	*Alameda*	1
Stafford, H. E.,	*Oakland*	1
Stafford, O. R.,	*Los Angeles*	9
Stahl, W. F.,	*Los Angeles*	9
Stalley, H. D.,	*Beverly Hills*	9
Stanford, K. J.,	*Fresno*	4
Stanley, L. L.,	*San Rafael*	10
Stanton, F. E.,	*Long Beach*	9
Stanton, R. H.,	*Pasadena*	9
Starbird, G. A.,	*King City*	13
Stark, B. W.,	*San Francisco*	22
Stark, J. H.,	*Oakland*	1
Stark, M.,	*Los Angeles*	9
Starks, D. J.,	*San Francisco*	22
Starr, R. W.,	*Los Angeles*	9
Staub, J. S.,	*San Jose*	27
Stauffer, M. L.,	*Pittsburg*	3
St. Clair, R.,	*Oakland*	1
Stealy, C. L.,	*San Diego*	21
Steddom, F. W.,	*Los Angeles*	9
Steele, A. A.,	*Los Angeles*	9
Steele, A. B.,	*Santa Barbara*	26
Steele, E. H.,	*Los Angeles*	9
Steele, J. T.,	*Dunsmuir*	30
Steele, M. T.,	*Los Angeles*	9
Steen, C. E.,	*Brea*	15
Steen, E. J.,	*Fullerton*	15
Steffy, J. L.,	*Santa Monica*	9
Stegeman, W.,	*Crescent City*	5
Stein, J. L.,	*Oakland*	1
Stein, W. F.,	*Fresno*	4
Steinberg, J.,	*Los Angeles*	9
Steinmetz, A. F.,	*Hayward*	1
Stephens, B. P.,	*Oakland*	1
Stephens, B. M.,	*Alameda*	1
Stephens, H. W.,	*San Francisco*	22
Stephens, J. S.,	*Los Angeles*	9
Stephens, P. H.,	*Los Angeles*	9
Stephens, W. C.,	*Pasadena*	9
Stephens, W. B.,	*Alameda*	1
Stephenson, H. A.,	*San Francisco*	22
Stern, A. A.,	*Sacramento*	18
Stevens, C. S.,	*Santa Barbara*	26
Stevens, G. M.,	*Los Angeles*	9
Stevens, J. B.,	*Los Angeles*	9
Stevens, W. L.,	*Baldwin Park*	9
Stevens, W. E.,	*San Francisco*	22
Stevenson, A. P.,	*Torrance*	9
Stevenson, G. L.,	*Sacramento*	18
Stevenson, G. R.,	*San Diego*	21
Stevenson, S. L.,	*San Francisco*	22
Stewart, A. E.,	*Los Angeles*	9
Stewart, C. W.,	*Hollywood*	9
Stewart, H. B.,	*Ripon*	33
Stewart, H. J.,	*San Diego*	21
St. Geme, J. W.,	*Los Angeles*	9
Stibbens, F. H.,	*Oakland*	1
Stice, T. H.,	*Imola*	14
Stiles, F. E.,	*San Francisco*	22
Stilson, G. D.,	*Long Beach*	9
Stirewalt, H. W.,	*Concord*	3
Stivers, C. G.,	*Los Angeles*	9
Stoddard, C. L.,	*San Diego*	21
Stoddard, J. McC.,	*Beverly Hills*	9
Stoddard, T. A.,	*San Francisco*	22
Stolle, F.,	*Dixon*	31
Stolz, C. E.,	*Los Angeles*	9
Stolz, H. R.,	*Berkeley*	1
Stone, B.,	*San Francisco*	22
Stone, R. S.,	*San Francisco*	22
Stone, W. J.,	*Pasadena*	9
Stoops, R. P.,	*Oakland*	1
Storey, T. A.,	*Stanford University*	27
Stork, V. E.,	*Los Angeles*	9
Stoughton, A. V.,	*Claremont*	9
Stovall, L.,	*Los Angeles*	9
Stowe, O. P.,	*Oakland*	1
Stowell, J. M.,	*San Francisco*	22
Strahlmann, L.,	*San Diego*	21
Strang, T. A.,	*Long Beach*	9
Strange, S. P.,	*San Francisco*	22
Strathern, H. J.,	*Hollywood*	9
Stratton, E. K.,	*San Francisco*	22
Stratton, G. W.,	*Marysville*	39
Stratton, J. M.,	*Berkeley*	1
Street, L. A. B.,	*Los Angeles*	9
Strickler, D.,	*San Francisco*	22
Strickler, J. P.,	*San Francisco*	22
Strietmann, W. H.,	*Oakland*	1
Strong, A.,	*Santa Paula*	37
Strong, D. C.,	*Upper Lake*	11
Strong, F. X.,	*Oakland*	1
Strongin, S.,	*Bakersfield*	7
Struble, H. P.,	*Hayward*	1
St. Sure, F. A.,	*San Diego*	21
Sturdivant, B. F.,	*Pasadena*	9
Sturgeon, C. T.,	*Los Angeles*	9
Sturges, R. R. L.,	*Los Angeles*	9
Styan, W. E.,	*San Francisco*	22
Sudlow, E. L.,	*San Fernando*	9
Suehs, P. E.,	*San Francisco*	22
Sugar, H.,	*Los Angeles*	9
Sullivan, C. S.,	*San Jose*	27
Sullivan, J. J.,	*Oakland*	1
Sullivan, J. M.,	*San Francisco*	22
Sullivan, N. R.,	*Santa Cruz*	28
Sullivan, W. J.,	*Hollywood*	9
Sulzbacher, C. I.,	*Los Angeles*	9
Sumerlin, H. S.,	*San Diego*	21
Sundberg, R. H.,	*San Diego*	21
Sundin, P. O.,	*Los Angeles*	9
Sunzeri, A. T.,	*San Jose*	27
Surryhne, B. F.,	*Modesto*	33
Suski, P. M.,	*Los Angeles*	9
Susnow, D. A.,	*San Francisco*	22
Sutherland, H. M.,	*Berkeley*	1
Sutherland, K. H.,	*Santa Ana*	15
Sutherland, P. R.,	*Los Angeles*	9
Sutherland, R. T.,	*Oakland*	1
Sutherlin, C. G.,	*Los Angeles*	9
Sutton, T. L.,	*Stockton*	23
Svoboda, F. C.,	*San Diego*	21
Swanson, C. F.,	*Los Angeles*	9
Swartz, R. E.,	*San Francisco*	25
Swauger, L. S.,	*Oakland*	1
Swearingen, F. C.,	*Pomona*	9
Sweeney, A. H.,	*Fresno*	4
Sweeney, J. P.,	*Millbrae*	25
Sweet, C. D.,	*Oakland*	1
Sweet, E.,	*Los Angeles*	9
Sweet, R. B.,	*Long Beach*	9
Sweetser, G. W.,	*Martinez*	3
Swenson, A. W.,	*Van Nuys*	9
Swenson, R. T.,	*Los Angeles*	9
Swett, W. F.,	*San Francisco*	22
Swezey, S.,	*Los Angeles*	9
Swigart, M.,	*Monterey*	13
Swim, W. A.,	*Los Angeles*	9
Swindt, J. K.,	*Pomona*	9
Swinney, R. W.,	*Long Beach*	9
Syer, W. H.,	*Los Angeles*	9
Sylvester, F. M.,	*Oakland*	1
Syman, L. W.,	*Los Angeles*	9
Symonds, C. W.,	*Pasadena*	9
Szukalski, J. P.,	*Pasadena*	9

T

Taber, K. W.,	*Los Angeles*	9
Taber, L. E.,	*San Francisco*	22
Takahashi, M.,	*Los Angeles*	9
Talbott, E. M.,	*San Francisco*	22
Talbott, G. M.,	*San Francisco*	22
Talbott, W. T.,	*Calexico*	6
Talmage, C. H.,	*Los Angeles*	9
Taltavall, W. A.,	*Redlands*	20
Tandowsky, R. M.,	*Pasadena*	9
Tanner, C. O.,	*San Diego*	21
Tarnutzer, B. C.,	*Los Angeles*	9
Tatro, R. F.,	*Loma Linda*	20
Tattersall, K. L.,	*Oakland*	1
Taubles, G. H.,	*San Francisco*	22
Taussig, L.,	*San Francisco*	22
Taylor, D. A.,	*San Francisco*	22
Taylor, E. M.,	*Oakland*	1
Taylor, E. C.,	*San Francisco*	22
Taylor, F. W. H.,	*Los Angeles*	9
Taylor, F. B.,	*Oakland*	1
Taylor, G. M.,	*Los Angeles*	9
Taylor, J. C. W.,	*San Francisco*	10
Taylor, L. H.,	*Oakland*	1
Taylor, L. E.,	*Los Angeles*	9
Taylor, P. A.,	*San Francisco*	10
Taylor, R. G.,	*Los Angeles*	9
Taylor, R. T.,	*Los Angeles*	9
Taylor, R. O.,	*San Diego*	21
Taylor, R. N.,	*Long Beach*	9
Teaby, W. L.,	*Monterey*	13
Teass, C. J.,	*San Luis Obispo*	24
Tebbe, F. H.,	*Oakland*	1
Tebbetts, H. E.,	*Whittier*	9
Tebbetts, H. B.,	*Los Angeles*	9
Tedstrom, M. K.,	*Anaheim*	15
Teel, A. W.,	*Los Angeles*	9
Teeter, A. L.,	*Oakland*	1
Temple, R. J.,	*Los Angeles*	9
Templeton, H. J.,	*Oakland*	1
Templeton, W. K.,	*Riverside*	17
Tepper, G. B.,	*Los Angeles*	9
Terrill, E. E.,	*Los Angeles*	9
Terry, R. A.,	*Long Beach*	9
Terry, W. I.,	*San Francisco*	22
Thayer, L. E.,	*Los Angeles*	9
Thearle, W. H.,	*Los Angeles*	9
Thelander, H. E.,	*San Francisco*	22
Thelen, E.,	*San Diego*	21
Thibodeau, J. A.,	*San Francisco*	22
Thieme, D. A.,	*Los Angeles*	9
Tholen, E. F.,	*Los Angeles*	9
Thomas, B.,	*Oakland*	1
Thomas, B. S.,	*Sacramento*	18

NAME	COUNTY	COUNTY SOCIETY NO.
Thomas, H. G.,	*Oakland*	1
Thomas, J. B.,	*Palo Alto*	27
Thomas, R. E.,	*Los Angeles*	9
Thomas, W. C.,	*Long Beach*	9
Thomas, W. McL.,	*San Diego*	21
Thomason, G.,	*Los Angeles*	9
Thomason, S. D.,	*San Dimas*	9
Thompson, A. C.,	*Mountain View*	27
Thompson, A. R.,	*Rio Vista*	31
Thompson, C. P.,	*San Francisco*	22
Thompson, C. V.,	*Pescadero*	25
Thompson, C. V.,	*Lodi*	23
Thompson, C. W.,	*Pasadena*	9
Thompson, E. E.,	*Oakland*	1
Thompson, E. H.,	*Burbank*	9
Thompson, E. E.,	*Red Bluff*	34
Thompson, F. F.,	*Los Angeles*	9
Thompson, G. E.,	*Fresno*	4
Thompson, H. A.,	*San Diego*	21
Thompson, H. D.,	*Los Angeles*	9
Thompson, H. F.,	*Los Angeles*	9
Thompson, H. L.,	*Los Angeles*	9
Thompson, H. L.,	*Long Beach*	9
Thompson, K. J.,	*Oakland*	1
Thompson, L. R.,	*San Pedro*	9
Thompson, O. E.,	*Riverside*	17
Thompson, R. J.,	*Los Angeles*	9
Thompson, R. C.,	*Whittier*	9
Thompson, R. L.,	*Burbank*	9
Thompson, V. P.,	*Los Angeles*	9
Thompson, W. B.,	*Los Angeles*	9
Thomson, A. M.,	*Santa Rosa*	32
Thomson, D.,	*Burbank*	9
Thomson, H. S.,	*San Francisco*	22
Thomson, R. R.,	*Oakland*	1
Thoren, M. E.,	*Weimar*	16
Thornburg, H. D.,	*Hollywood*	9
Thorne, I. W.,	*San Francisco*	22
Thorner, M.,	*Santa Barbara*	26
Thornton, A. J.,	*San Diego*	21
Thornton, D. D.,	*Los Angeles*	9
Thornton, J.,	*Los Angeles*	9
Thorpe, A. C.,	*Los Angeles*	9
Thorpe, F.,	*Los Angeles*	9
Thorpe, L. S.,	*Los Angeles*	9
Threlfall, D. R.,	*San Jose*	27
Thurber, F.,	*Hollywood*	9
Thurber, P.,	*Los Angeles*	9
Thuresson, P. F.,	*Riverside*	17
Thurlow, A. A.,	*Santa Rosa*	32
Tiber, L. J.,	*Los Angeles*	9
Tice, E. W.,	*Los Angeles*	9
Tickell, A. H.,	*Nevada City*	16
Tiedemann, I. D.,	*Glendale*	9
Tiffany, D. F. E.,	*San Jose*	27
Tiffany, E. V.,	*Oakland*	1
Tillman, F. J.,	*Fresno*	4
Tillman, T. E.,	*San Francisco*	22
Tillmanns, C.,	*Los Angeles*	9
Tillotson, M. H.,	*Woodland*	38
Tillotson, R. S.,	*Woodland*	38
Tilton, A. L.,	*Los Angeles*	9
Timme, A. R.,	*Los Angeles*	9
Timon, A. N.,	*Los Angeles*	9
Tippett, G. W.,	*San Francisco*	22
Tipton, S. P.,	*Watsonville*	28
Tisinger, E. L.,	*San Bernardino*	20
Titcomb, L. R.,	*Los Angeles*	9
Titus, C. I.,	*Sacramento*	18
Titus, J. H.,	*Ontario*	20
Tobias, M. J.,	*Los Angeles*	9
Tobriner, O.,	*San Francisco*	22
Tock, E. W.,	*Orange*	15
Todd, H. A.,	*Visalia*	35
Todd, J. B.,	*Los Angeles*	9
Todorovic, D. D.,	*Tennant*	30
Toffelmeier, D. D.,	*Oakland*	1
Toland, C. G.,	*Los Angeles*	9
Tollefson, D. G.,	*Los Angeles*	9
Toller, R. B.,	*Talmage*	11
Tolman, G. P.,	*Watsonville*	28
Tomlinson, R. F.,	*San Francisco*	22
Toner, J. M.,	*San Francisco*	22
Toomey, F. E.,	*San Diego*	21
Topham, E.,	*San Francisco*	22
Topping, F. P.,	*Sacramento*	18
Topping, M. H.,	*Los Angeles*	9
Torrell, G. J.,	*Los Angeles*	9
Torrano, M. A.,	*Oakland*	1
Torre, E. D.,	*San Francisco*	22
Torrens, A. S.,	*Hanford*	4
Torrey, H. B.,	*Palo Alto*	27
Tourtillot, W. W.,	*Porterville*	35
Tow, J. E.,	*San Diego*	21
Tower, O. I.,	*Los Angeles*	9
Towne, E. B.,	*San Francisco*	22
Townsend, C. E.,	*Los Angeles*	9
Traber, C. H.,	*Reedley*	4
Trainor, J. V.,	*Los Angeles*	9
Trainor, M. E.,	*Los Angeles*	9
Tralle, G. M.,	*Santa Ana*	15
Traver, C. M.,	*Patton*	20
Travis, H. P.,	*Los Angeles*	9
Tretheway, L. E.,	*Manteca*	23
Trewhella, J. S.,	*Montebello*	9
Trick, T. R.,	*Los Angeles*	9
Trimble, H. G.,	*Oakland*	1
Trimmer, E. L.,	*Los Angeles*	9
Trott, L. d'N.,	*Los Angeles*	9
Trowbridge, D. H.,	*Fresno*	4
Truax, J. P.,	*Lompoc*	26
True, H. F.,	*Sacramento*	18
Truxaw, J. W.,	*Anaheim*	15
Tucker, R. G.,	*Alhambra*	9
Tully, J. J.,	*Stockton*	23
Tupper, R. B.,	*Fresno*	4
Turco, E. A.,	*San Jose*	27
Turely, J. G.,	*Los Angeles*	9
Turnbull, F. M.,	*Los Angeles*	9
Turner, E. C.,	*Sacramento*	18
Turner, J. H.,	*Huntington Park*	9
Tuttle, S.,	*San Francisco*	22
Tuteur, E. B.,	*Los Angeles*	9
Tyler, L. G.,	*San Rafael*	5
Tyroler, F. N.,	*Los Angeles*	9
Twain, S. A.,	*Berkeley*	1
Twitchell, E. W.,	*San Francisco*	22

U

Uhl, G M.,	*Sacramento*	18
Uhls, R. T.,	*Long Beach*	9
Ullman, H. J.,	*Santa Barbara*	26
Umezawa, R. L.,	*Los Angeles*	9
Updegraff, H. L.,	*Hollywood*	9
Up de Graff, T. S.,	*Pasadena*	9
Upshaw, H. T.,	*Pasadena*	9
Urriolagoitia, F.,	*San Francisco*	22
Ussher, N. T.,	*Santa Barbara*	26
Utter, J. W.,	*Anaheim*	15
Uyeyama, H.,	*Oakland*	1

V

Vachout, M. A.,	*Southgate*	9
Vallee, J. E.,	*Los Angeles*	9
Van Allen, L. K.,	*Ukiah*	11
Vance, H. W.,	*Pasadena*	9
Vance, J. T.,	*Sacramento*	18
Van Cott, W. B.,	*Los Angeles*	9
Van Dalsem, S. B.,	*San Jose*	27
Van Dalsem, W. S.,	*San Jose*	27
Van de Carr, F. R.,	*Oakland*	1
Van Den Berg, W. J.,	*Sacramento*	18
Van Eman, O. H.,	*El Centro*	6
Vanderburgh, C. M.,	*Fresno*	4
Van der Leek, P.,	*Stockton*	23
Van Fleet, H. D.,	*Los Angeles*	9
Van Meter, A. L.,	*Stockton*	23
Van Metre, H.,	*Los Angeles*	9
Van Nuys, R. G.,	*Berkeley*	1
Van Ornum, E. N.,	*Los Angeles*	9
Van Paing, J. F.,	*Santa Barbara*	26
Van Pelt, R. S.,	*Los Angeles*	9
Van Sciver, C. B.,	*Los Angeles*	9
Van Scoyoc, J. G.,	*Los Angeles*	9
Van Sickle, J. R.,	*Santa Monica*	9
Van Soest, E. H.,	*Los Angeles*	9
Van Voorhees, G. T.,	*San Pedro*	9
Van Zwalenburg, C.,	*Riverside*	17
Varden, A. E.,	*San Bernardino*	20
Vardon, E. M.,	*Los Angeles*	9
Varian, M. G.,	*Los Angeles*	9
Vaughan, L. B.,	*Long Beach*	9
Vecki, M. E.,	*San Francisco*	22
Vecki, V. G.,	*San Francisco*	22
Vener, H. I.,	*Sawtelle*	9
Venzke, H.,	*Pasadena*	9
Veon, J. E.,	*Bakersfield*	7
Vercellini, G.,	*Fresno*	4
Verne, V. E.,	*Long Beach*	9
Vickerson, J. I.,	*Oakland*	1
Victors, E. A.,	*San Francisco*	22
Vidgoff, I. J.,	*Los Angeles*	9
Vidrickson, H. L.,	*Weed*	30
Vieceili, J. D.,	*San Francisco*	22
Vieria, E.,	*Sebastopol*	32
Vinetz, J. C.,	*Los Angeles*	9
Viole, P. P.,	*Los Angeles*	9
Violett, C. C.,	*Garden Grove*	15
Visalli, J.,	*San Francisco*	22
Vischi, G. J. J.,	*Stockton*	23
Visscher, L. G.,	*Los Angeles*	9
Vizzard, W. R.,	*San Francisco*	22
Voight, C. E.,	*San Francisco*	22
Vollert, A. J.,	*San Francisco*	22
Vollmer, H. W.,	*Sanitarium*	14
von Adelung, E.,	*Oakland*	1
von Briesen, H.,	*Los Angeles*	9
Von der Lieth, H. O.,	*San Francisco*	22
von Geldern, H.,	*San Francisco*	22
von Geldern, C. E.,	*Sacramento*	18
von Wedelstaedt, B.,	*Long Beach*	9
Voorhees, G. L.,	*Los Angeles*	9
Voorhees, H. M.,	*Los Angeles*	9
Voorsanger, W. C.,	*San Francisco*	22
Vowinckel, F. W.,	*San Francisco*	22
Vruwink, J.,	*Los Angeles*	9

W

Waddell, D. Q.,	*Los Angeles*	9
Waddell, W. E.,	*Los Angeles*	9
Wade, L. T.,	*San Luis Obispo*	24
Wade, R. S.,	*Santa Ana*	15
Wagner, A. F.,	*Los Angeles*	9
Wagner, C. R.,	*Pasadena*	9
Wagner, J. H.,	*Selma*	4
Wagner, L. D.,	*Pasadena*	9
Wahl, H. A.,	*San Francisco*	22
Wahle, H.,	*Oakland*	1
Wahlen, J. A.,	*Montebello*	9
Wahrhaftig, M. J.,	*Fresno*	4
Waitzfelder, F.,	*Los Angeles*	9
Wakefield, R. F.,	*Pasadena*	9
Wald, O. E.,	*Los Angeles*	9
Walker, A. W.,	*Riverside*	17
Walker, B. F.,	*Fresno*	4
Walker, C. A.,	*San Francisco*	22
Walker, C. B.,	*Los Angeles*	9
Walker, G. W.,	*Fresno*	4
Walker, J. D.,	*Los Angeles*	9
Walker, J. E.,	*Long Beach*	9
Walker, J. R.,	*Fresno*	4
Walker, M. E.,	*Oakland*	1
Walker, R. A.,	*Alhambra*	9
Walker, R. S.,	*Oakland*	1
Wall, A. S.,	*Los Angeles*	9
Wall, H. W.,	*Hollywood*	9
Wallace, A.,	*Los Angeles*	9
Wallace, C. T.,	*Eureka*	5
Wallace, E. L. R.,	*Los Angeles*	9
Wallace, I.,	*San Francisco*	22
Wallace, J. A.,	*Placentia*	15
Wallace, W. S.,	*Orange*	15
Wallach, I. A.,	*Los Angeles*	9
Waller, G. P., Jr.,	*Los Angeles*	9
Wallerius, R. M.,	*Sacramento*	18
Walrath, G. B.,	*Los Angeles*	9
Walsh, J. F.,	*Eureka*	5
Walter, F. J.,	*San Diego*	21
Walters, C. M. C.,	*Los Angeles*	9
Walters, H. S.,	*San Luis Obispo*	24
Walters, P. R.,	*Berkeley*	1
Walton, G. E.,	*Oakland*	1
Walton, H. M.,	*Loma Linda*	20
Warburton, J. A.,	*Burlingame*	25
Ward, J. M.,	*Oakland*	1
Ward, R. L.,	*Buckeye, Ariz.*	9
Ward, R.,	*San Francisco*	22
Wardrip, B. H.,	*San Jose*	27
Ware, E. R.,	*Los Angeles*	9
Ware, J. G.,	*Santa Barbara*	26
Warmer, C. A.,	*Los Angeles*	9
Warner, H. E.,	*Los Angeles*	9
Warner, O. H.,	*San Diego*	21
Warne, R. C.,	*Ossining, N. Y.*	15
Warnock, A. W.,	*San Pedro*	9
Warren, H. C.,	*Belmont*	25
Warren, J. W.,	*Los Angeles*	9
Warren, J. P.,	*San Francisco*	22
Warwick, C. S.,	*Santa Barbara*	26
Washburn, W. W.,	*San Francisco*	22
Watanabe, L. M.,	*San Jose*	27
Waterman, H. J.,	*Berkeley*	22
Waters, Z. O.,	*San Francisco*	22
Watkins, J. T.,	*San Francisco*	22
Watkins, L. H.,	*Pasadena*	9
Watkins, W. E.,	*Santa Ana*	15
Watson, A. R.,	*Eureka*	5
Watson, F. V.,	*Hollywood*	9
Watson, L. F.,	*Los Angeles*	9
Watson, R. G.,	*Oakland*	1
Watson, T.,	*Sunnyvale*	27
Watters, E. M.,	*Santa Cruz*	28
Watters, H. G.,	*Watsonville*	28
Way, S. C.,	*San Francisco*	22
Wayland, C. A.,	*San Jose*	27
Wayland, C.,	*San Jose*	27
Wayland, R. T.,	*Glendale*	9
Wayte, E. W.,	*Norwalk*	9
Weaver, A. C.,	*Santa Monica*	9
Weaver, C. H.,	*Los Angeles*	9
Weaver, D. D.,	*Oakland*	1
Weaver, L. W.,	*Oakland*	1
Webb, A. N.,	*Lake Arrowhead*	20
Webber, W. T.,	*Long Beach*	9
Weber, A. L.,	*Upland*	20
Weber, W. L.,	*Los Angeles*	9
Webster, D. P.,	*Fresno*	4
Webster, G. M.,	*Patton*	20
Webster, J. C.,	*Los Angeles*	9
Webster, J. S.,	*Mariposa*	12
Webster, O. L.,	*Holtville*	6
Weddle, C.,	*Dinuba*	35
Wedgewood, P. E.,	*San Diego*	21
Weeks, A.,	*San Francisco*	22
Wegeforth, H. M.,	*San Diego*	21
Weger, G. S.,	*Redlands*	20
Wehrly, J.,	*Santa Ana*	15
Wehrly, W. S.,	*Santa Ana*	15
Weil, S. N.,	*Rodeo*	3

NAME	COUNTY	COUNTY SOCIETY NO.
Weinberger, J.,	*San Diego*	21
Weiner, W. M.,	*San Francisco*	22
Weir, J. J.,	*Loma Linda*	20
Weirich, E. W.,	*Angels Camp*	23
Weiser, A. D.,	*Los Angeles*	9
Weiskotten, W. O.,	*San Diego*	21
Weiss, K. F.,	*Visalia*	35
Weitkamp, A. H.,	*Los Angeles*	9
Welbourn, L. S.,	*Van Nuys*	9
Welbourn, M. A.,	*Los Angeles*	9
Welbourn, P. M.,	*Los Angeles*	9
Welch, E. H.,	*Pomona*	9
Welch, S. H.,	*Glendale*	9
Welfer, C. R.,	*Los Angeles*	9
Welker, C. J.,	*Los Angeles*	9
Weller, T. W.,	*Oakland*	1
Wells, C. E.,	*Sugar Pine*	4
Wells, E. W.,	*Los Angeles*	9
Wells, G. D.,	*Los Angeles*	9
Wells, G. S.,	*Santa Barbara*	26
Wells, M. C.,	*Los Angeles*	9
Wells, S. J.,	*Sacramento*	18
Wells, W. B.,	*Riverside*	17
Welpton, M. A.,	*San Diego*	21
Welsh, O. A.,	*Ventura*	37
Welti, L.,	*Napa*	14
Welty, C. F.,	*San Francisco*	22
Wemple, E. LeR.,	*Verdugo City*	9
Werlich, R. E.,	*San Diego*	21
Werner, E. A. S.,	*Los Angeles*	9
Wessels, A. B.,	*San Diego*	21
Wessels, W. F.,	*Los Angeles*	9
Wesson, M. B.,	*San Francico*	22
West, F. D.,	*Beaumont*	17
West, F. B.,	*Los Angeles*	9
West, H. F.,	*Los Angeles*	9
Westerhout, C. E.,	*Brea*	15
Westphal, H. G.,	*Glendale*	9
Wetmore, C. T.,	*Berkeley*	1
Weymann, M. F.,	*Los Angeles*	9
Whalman, H. F.,	*Los Angeles*	9
Wharton, C. G.,	*Los Angeles*	9
Wheat, J. E.,	*San Fernando*	9
Wheatley, W. G.,	*Azusa*	9
Wheeler, E. P.,	*Long Beach*	9
Wheeler, I. A.,	*Cloverdale*	32
Wheelis, J. M.,	*Los Angeles*	9
Whitaker, L. S.,	*San Jose*	27
Whitcomb, E. L.,	*Los Angeles*	9
White, F. M.,	*Los Angeles*	9
White, H. L.,	*Red Bluff*	34
White, J. F.,	*San Diego*	21
White, L. F.,	*Los Angeles*	9
White, P. G.,	*Los Angeles*	9
Whitelock, T. S.,	*San Diego*	21
Whitelock, T. S., Jr.,	*San Diego*	21
Whiting, F. M.,	*Oroville*	2
Whitmer, C. F.,	*Colton*	20
Whitney, H. H.,	*Burlingame*	25
Whitney, J. L.,	*San Francisco*	22
Whittaker, L. F.,	*Huntington Beach*	15
Wickman, H. J.,	*Riverside*	17
Wiebe, D.,	*Selma*	4
Wiebe, F. E.,	*Soledad*	13
Wiel, H. L.,	*San Francisco*	22
Wienholz, P. P.,	*San Francisco*	22
Wier, T. F.,	*San Diego*	21
Wiese, W. F.,	*Fresno*	4
Wightman, W. D.,	*Los Angeles*	9
Wilbor, L. M.,	*San Francisco*	22
Wilbur, B. C.,	*Palo Alto*	27
Wilbur, R. L.,	*Stanford University*	22
Wilcox, A. B.,	*Santa Barbara*	26
Wilcox, C. F.,	*Huntington Park*	9
Wilcox, M. R.,	*Hollywood*	9
Wilcox, R. W.,	*Long Beach*	9
Wilder, E. M.,	*Sacramento*	18
Wiley, E. H.,	*Los Angeles*	9
Wiley, H. J.,	*Huntington Park*	9
Wilhelm, L. F. X.,	*Los Angeles*	9
Wilken, H. T.,	*Santa Monica*	9
Wilkinson, A. M.,	*Hollywood*	9
Wilkinson, A. J.,	*San Diego*	21
Willard, W. P.,	*San Francisco*	22
Wilcutt, G. H.,	*Ross*	10
Williams, A. H.,	*Carpinteria*	26
Williams, C. G.,	*Santa Monica*	9
Williams, D. B.,	*Evanston, Wyo.*	14
Williams, D. B.,	*Colton*	20
Williams, E. H.,	*Los Angeles*	9
Williams, F.,	*San Francisco*	22
Williams, F. F., Jr.,	*Patton*	20
Williams, J. B.,	*Los Angeles*	9
Williams, J. C.,	*San Francisco*	22
Williams, N. H.,	*Los Angeles*	9
Williams, P. M.,	*Los Angeles*	9
Williams, R.,	*Los Angeles*	9
Williams, T. M.,	*Palo Alto*	27
Williams, W. F.,	*Oakland*	1
Williamson, M. A.,	*Lone Pine*	6
Williamson, M. C.,	*Upland*	20
Williamson, N. E.,	*Stockton*	23
Willier, A. F.,	*San Diego*	21
Willis, H. Q.,	*Costa Mesa*	15
Willits, E. K.,	*San Francisco*	22
Wills, C. A.,	*Oakland*	1
Wills, I.,	*Santa Barbara*	26
Willson, L. R.,	*Fresno*	4
Wilmar, A. H.,	*Paso Robles*	24
Wilmoth, M. E.,	*Los Angeles*	9
Wilson, A. D.,	*Palm Springs*	17
Wilson, C. G.,	*Palo Alto*	27
Wilson, C.,	*Los Angeles*	9
Wilson, C. A.,	*Monterey*	13
Wilson, D. R.,	*San Jose*	27
Wilson, G. W.,	*Los Angeles*	9
Wilson, G.,	*Sacramento*	18
Wilson, H. H.,	*Los Angeles*	9
Wilson, H. F.,	*San Francisco*	22
Wilson, H. S.,	*N. Hollywood*	9
Wilson, H. P.,	*Whittier*	9
Wilson, J. D.,	*Berkeley*	1
Wilson, J. B.,	*San Francisco*	22
Wilson, J. C.,	*Los Angeles*	9
Wilson, J. M.,	*Pasadena*	9
Wilson, J. W.	*San Francisco*	22
Wilson, K. R.,	*Santa Barbara*	26
Wilson, L. E.,	*San Francisco*	22
Wilson, R. D.,	*Los Angeles*	9
Wilson, W. L.,	*San Jose*	27
Wimmer, S. D.,	*Los Angeles*	9
Wimp, W. H.,	*Pasadena*	9
Wind, E.,	*Hollywood*	9
Wineberg, A. C.,	*Oakland*	1
Wineland, A. J.,	*Beverly Hills*	9
Wing, L. A.,	*Eureka*	5
Winnard, W. F. R.,	*Los Angeles*	9
Winslow, A. L.,	*Oakland*	1
Winterberg, W. H.,	*San Francisco*	22
Winters, W. P.,	*San Diego*	21
Wise, D. C.,	*Pittsburg*	3
Wise, P. L.,	*San Jose*	27
Wiser, F. C.,	*Los Angeles*	9
Wislocki, E. J.,	*San Jose*	27
Wisner, F. P.,	*Marysville*	12
Wissner, L. O.,	*Modesto*	33
Witherbee, H. R.,	*Los Angeles*	9
Witherbee, O. O.,	*Los Angeles*	9
Witter, C. B.,	*Los Angeles*	9
Wold, A. P.,	*Oakland*	1
Wolf, G. L.,	*San Francisco*	22
Wolfe, H. H.,	*Fort Bragg*	11
Wolferman, A. G.,	*Los Angeles*	9
Wolff, E.,	*San Francisco*	22
Wolff, L.,	*Los Angeles*	9
Wolfsohn, J. M.,	*San Francisco*	22
Wolfsohn, M.,	*Monterey*	13
Woller, W. F.,	*Oakland*	1
Wood, C. H.,	*Glendora*	9
Wood, D. A.,	*San Francisco*	22
Wood, F. W.,	*Alhambra*	9
Wood, G. J.,	*Calistoga*	14
Wood, H. A.,	*Long Beach*	9
Wood, J. A.,	*Anaheim*	15
Wood, N. N.,	*Los Angeles*	9
Wood, R. F.,	*Riverside*	21
Wood, W. A.,	*Oakland*	1
Woodward, D. S.,	*Watsonville*	28
Woodbridge, B.,	*Roseville*	16
Woodhull, C. G.,	*Los Angeles*	9
Woodhull, R. A.,	*Los Angeles*	9
Woods, D. L.,	*Los Angeles*	9
Woods, D. K.,	*San Diego*	21
Woods, R. A.,	*Los Angeles*	9
Woodward, E. B.,	*Monrovia*	9
Woolf, M. S.,	*San Francisco*	22
Woolfan, E. B.,	*Los Angeles*	9
Woolford J. S.,	*Sacramento*	18
Woolsey, C. H.,	*San Francisco*	22
Woolsey, J. H.,	*San Francisco*	22
Workman, R. A.,	*Pacific Grove*	13
Worster, W. W.,	*San Gabriel*	9
Worthington, G. B.,	*San Diego*	21
Worthington, L.,	*Bakersfield*	7
Wright, B. W.,	*Los Angeles*	9
Wright, C. A.,	*Los Angeles*	9
Wright, F. L.,	*Oakland*	1
Wright, H. J.,	*Healdsburg*	32
Wright, J. M.,	*Pasadena*	9
Wright, W. B. Jr.,	*Long Beach*	9
Wright, W. M.,	*Los Angeles*	9
Wrigley, G. C.,	*Sonora*	36
Wrinkle, G. S.,	*Talmage*	11
Wyckoff, H. A.,	*San Francisco*	22
Wyers, R. E.,	*Spadra*	9
Wylie, C. A.,	*San Bernardino*	20
Wymore, W. W.,	*San Francisco*	22
Wynns, H. le R.,	*Baltimore, Md.*	1
Wythe, M.,	*Oakland*	1

Y

Yabroff, S. W.,	*Oakland*	1
Yager, R. E.,	*Santa Ana*	15
Yager, W. L.,	*Los Angeles*	9
Yaker, D. N.,	*Los Angeles*	9
Yamao, E.,	*Walnut Grove*	18
Yates, J. E.,	*Sacramento*	18
Yeagle, R. P.,	*Santa Ana*	15
Yerxa, C. W.,	*Los Angeles*	9
Yoakam, F. A.,	*Moorpark*	37
Yocom, F. W.,	*San Luis Obispo*	33
Yoell, R. A.,	*San Francisco*	22
Yost, F. O.,	*Los Angeles*	9
Young, C. S.,	*Los Angeles*	9
Young, E. N.,	*San Diego*	21
Young, F. B.,	*Long Beach*	9
Young, J. W.,	*Beverly Hills*	9
Young, J. H.,	*San Diego*	21
Young, N. A.,	*Walnut Park*	9
Young, P. G.,	*Sacramento*	18

Z

Zaiser, H. E.,	*Orange*	15
Zanger, H. G.,	*San Jose*	27
Zeff, M. G.,	*Berkeley*	1
Zeller, A. H.,	*Los Angeles*	9
Zeller, J.,	*Los Angeles*	9
Zeimer, I. S.,	*Stockton*	23
Zelinsky, F.,	*Los Angeles*	9
Zeller, W. C.,	*Visalia*	35
Zieber, R. L.,	*Bakersfield*	7
Ziegelman, E. F.,	*San Francisco*	25
Zimmerer, S. R.,	*Mecca*	17
Zimmerman, H.,	*Sacramento*	18
Zimmerman, H. H.,	*Red Bluff*	34
Zirker, D. W.,	*Merced*	12
Zirkle, T. I.,	*Loma Linda*	20
Ziskind, E.,	*Los Angeles*	9
Zobel, A. J.,	*San Francisco*	22
Zochert, L. W.,	*La Mesa*	21
Zorb, G. A.,	*Los Angeles*	9
Zumwalt, E. R.,	*Tulare*	35
Zumwalt, F. H.,	*San Francisco*	22
Zumwalt, R. S.,	*San Francisco*	22

ASSOCIATE MEMBERS

Cummins, W. T.,	*San Francisco*	22
Leake, C. D.,	*San Francisco*	22
Moody, R. O.,	*Berkeley*	1
Mosher, C. D.,	*Stanford University*	27
Munly, W. C.,	*San Francisco*	22
Rusk, G. Y.,	*San Francisco*	22

HONORARY MEMBERS

Edwards, W. A.,	*El Cajon*	9
Gill, A. F.,	*Banning*	9
Goodenow, N. H.,	*Monrovia*	9
Hermann, A. J.,	*Los Angeles*	9
Kalb, G. B.,	*Monrovia*	9
Kellogg, F. B.,	*Santa Monica*	9
King, J. C.,	*Riverside*	17
Lilienerantz, A.,	*Oakland*	1
Perry, W. F.,	*Los Angeles*	9
Sanders, A. O.,	*Palo Alto*	9
Shawhan, R. C.,	*Otten, N. C.*	9
Sill, E. R.,	*Oakland*	1
Stillman, S.,	*San Francisco*	22
Utley, J. H.,	*Beverly Hills*	9
Wills, W. LeM.,	*San Marino*	9

RETIRED

Baker, C. Le B. J.,	*Point Loma*	21
Baker, F.,	*Point Loma*	21
Baumeister, E. E.,	*San Francisco*	2
Bogue, H. A.,	*Ontario*	20
Bryan, E. H.,	*Auburn*	16
Cohn, D.,	*San Francisco*	22
Davis, B.,	*Los Gatos*	12
DePuy, E. S.,	*Oakland*	1
Doig, R. L.,	*San Diego*	21
Ford, C.,	*San Francisco*	22
Francis, L. H.,	*Cotati*	32
Frederick, M. W.,	*Brentwood*	22
Gatchell, W. Le F.,	*Chico*	2
Goodman, E.,	*San Francisco*	22
Goodrich, H. A.,	*San Jose*	27
Grissim, J. D.,	*Oakland*	1
Henderson, J. J.,	*San Mateo*	22
Hogan, J. J.,	*Vallejo*	22
Hulbert, R. G.,	*San Diego*	21
Kahn, A. J.,	*San Francisco*	22
Lorini, R.,	*Paris, France*	21
MacDonald, E. A.,	*Beverly Hills*	20
McClenahan, H. C.,	*San Francisco*	22
McDaniel, J. L.,	*San Fernando*	9
McKee, A. B.,	*San Francisco*	22
McSwain, T. O.,	*Visalia*	35
McVey, C. L.,	*Oakland*	1
Parker, P. J.,	*San Diego*	21
Power, H.,	*Palo Alto*	27
Raymond, A.,	*San Francisco*	22
Richter, C. M.,	*San Francisco*	22
Rothganger, G.,	*Oakland*	1
Sampson, A. F.,	*San Francisco*	22
Simmons, G. C.,	*Inverness*	18
Simmons, S. E.,	*Berkeley*	18
Smith, J. F.,	*San Francisco*	22
Somers, H.,	*Morgan Hill*	22
Stiles, W. H.,	*San Bernardino*	20
Swisher, J. R.,	*Healdsburg*	32
Taylor, M. C.,	*Martinez*	32
Ward, M. W.,	*Woodland*	23
Wheeler, J. S.,	*Santa Cruz*	38
Whiffen, R. A.,	*San Jose*	16
Williams, E. H.,	*Norwalk, Conn.*	27
Winslow, T. H.,	*Oakland*	1
Yates, E. M.,	*Santa Rosa*	32
Zussman, S.,	*San Francisco*	22

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

PROPOSED CALIFORNIA PUBLIC HEALTH LEGISLATION†

Bills Introduced the First Half of the 1933 Legislative Session of Direct or Indirect Interest to the Medical Profession

Bills preceded by an asterisk (*) are of interest to the Board of Medical Examiners, and concern directly or indirectly administrative functions of said board.

Abolishing Departments—See Departments Abolished.

Acts to Amend an Act (title not stated. So-called Skeleton Bills).
A. B. 1690 to 1704, inclusive.

Acts to Repeal an Act (title not stated. So-called Skeleton Bills).
A. B. 1633.
A. B. 1635 to 1658, inclusive.

**Attorneys.*
S. B. 611, Bush et al.—re salaries of attorneys prosecuting violators of the State Poison Law.
S. B. 629, Bush, Allen et al.—re attorney for Division of Narcotic Enforcement.

**Boards Created.*
See Fortune Tellers, Fakirs, etc.
See Naturopathy.

**Board of Health*—See Department of Public Health.
A. B. 1342, Williamson—amending Sections 9, 10, 11, 12, 13, 14, 15, 16 and 20, re misbranded drugs and defining Board of Health powers.
A. B. 1848, Frazier—adding Section 3*a* to Tuberculosis Act.

**Chiropody.*
A. B. 313, Hornblower—amending Sections 8 and 17 of Medical Practice Act.
A. B. 1924, Gilmore—adding Section 21*a* to Medical Practice Act, re deformity correction appliances.

**Chiropractic.*
Assembly Constitutional Amendment No. 4, amending Section IV of Constitution re Chiropractic.
A. B. 18, Maloney—amending Section 3, 4, 9 and 12 of Chiropractic Initiative.
A. B. 1740, Maloney—an act admitting Chiropractors to State Institutions and providing for removal of superintendents thereof for unfair discrimination.

**Clinics.*
A. B. 1277, Nielsen—an act to define clinics and place them under State Board of Health. (Important.)

Codes—Amendments.
See Political Code.

Corporations.
A. B. 926, Feigenbaum—amending Section 21, re corporations.

**Departments Abolished.*
S. B. 547—abolish Division of Narcotic Enforcement.
S. B. 1010—abolish Division of Narcotic Enforcement and return to Pharmacy Board.

**Department of Professional Standards (and Vocational).*
A. B. 1813, O'Connor—an act to abolish the Department and transfer boards to other departments.
S. B. 1152, Bush, Allen, Duval et al.—adds new section to Political Code re Department of Professional and Vocational Standards.

**Department of Public Health.*
A. B. 1342, Williamson—amending Health Laws re misbranded drugs.
A. B. 1674, Alter, Boyle et al.—adding Section 272*h* to Political Code relating to powers and duties of Department of Public Health.
A. B. 1848, Frazier—adding Section 3*a* to Tuberculosis Act.

**Drugs*—See Pharmacy Act.
A. B. 784, Ross—amending Section 2 of Itinerant Vendor Act.
A. B. 1321, Boyle—adding Section 654*d* to Penal Code, re advertising of drugs and medicine.
A. B. 1342, Williamson—amending Section 9, 10, 11, 12, 13, 14, 15, 16 and 20, Pure Drug Act, re misbranded drugs.

**Embalmers.*
S. B. 56, Swing—adding Section 11 to Act.
A. B.* Cobb and Roberts—amending Embalmers and Funeral Directors Act. *No. 459.
A. B. 2142, McMurray—an act regulating embalmers and repealing the present law.

Eugenics—See Sterilization.
A. B. 211—providing for sterilization of select individuals in state hospitals.

Feeble-Minded.
A. B. 255, Riley—amending Section 2192, Political Code, requiring counties to pay for care of feeble-minded.
A. B. 539, Lyon—amending Political Code re incompetents.
A. B. 2246, Robinson—Spadra Hospital to be used for feeble-minded.

**Fortune Tellers and Fakirs.*
A. B. 1847—an act to license fortune tellers, fakirs and similar persons engaged in treating the human body or mind.

Health—See Department of Public . . . County.

**Hospitals*—See State Medical Service Companies.
A. B. 695, Robinson—unlawful for hospital associations to operate except under Insurance Commissioner.
A. B. 1777, Fisher—amending Section 2154, Political Code 4223, re County Hospitals. (Important.)
A. B. 2190, Bliss—amending Section 4223 of Political Code, re county hospital pay patients. (Important.)
A. B. 2246, Williamson—state hospital at Spadra to be used for feeble-minded.
S. B. 953, Fellom—regulating organization and operation of hospital associations. (Important.)

Indigents.
A. B. 1322—maintenance of in state hospitals, adding Section 12.
A. B. 1743, Dempster—amending Political Code 4041.16, re maintenance. (Important.)
A. B. 1778, Fisher—to provide aid for indigents. (Important.)
A. B. 1780, Fisher—to amend Section 2, 2½, 3 and 4 of an act re support of indigents. (Important.)

Insurance—See Hospitals . . . Medical Service Companies.
A. B. 1074, Hornblower—an act to define life, accident and health insurance.
A. B. 1084, Robinson—amending Section 1, re misrepresentation of insurance.

**Medical Practice Act.*
A. B. 313, Hornblower—amending Section 8 and 17 of Medical Practice Act re chiropodists.
A. B. 1924—adding Section 21*a* to Medical Practice Act, re persons retailing physical deformity correction appliances.
A. B. 1813, O'Connor—Medical Board placed under Board of Health.
S. B. 802, Williams—amending Section 11, re drugless practice.

**Medical Service Companies.*
A. B. 695, Robinson—unlawful to operate except under Insurance Commissioner.
S. B. 953, Fellom—regulating organization and operation of hospital associations. (Important.)

**Narcotics.*
A. B. 349—Pharmacy Board to take over Narcotic Enforcement.
A. B. 2246, Robinson—Spadra Hospital to be used for feeble-minded.
S. B. 547, Allen, Duval et al.—to repeal State Narcotic Act.
S. B. 1010, Allen, Duval et al.—repeal State Narcotic Act and return to Pharmacy Board.

**Narcotic Hospital.*
A. B. 2246, Robinson—Spadra Hospital to be used for care of feeble-minded.

**Naturopathy.*
A. B. 1159, Gilmore—creating Naturopathic Association of California.
A. B. 1306, Dempster—establishing a Board of Naturopathy. (Important.)

Nurses.
A. B. 288—amending Workmen's Compensation Act—registered nurse employed in hospitals accommodating three or more patients shall be held to be employee.

**Osteopathy.*
A. B. 477, Jones—repealing Osteopathy Act of 1901.

**Pharmacy.*
A. B. 349, Boyle—Pharmacy Board to take over Narcotic Department of Enforcement.
A. B. 1590, Boyle—amending State Pharmacy Act.
S. B. 1010, Bush, Allen, et al.—repealing Narcotic Act and returning to Board of Pharmacy.

Political Code.
A. B. 539, Lyon—re care of mental incompetents.
A. B. 1674, Alter, Boyle, et al.—adding Section 372*h* to Political Code re duties Department of Public Health.
A. B. 1743—amending Political Code, Section 4041.16, re maintenance of indigents.
A. B. 2003, Grubbs—adding Section 372*h* to Political Code re positions and duties in Department of Public Health.
S. B. 552, Fellom—adding Section 366*h* and 366*m* to Political Code, re State Psychiatrist.

† Compiled by C. B. Pinkham, M. D., secretary-treasurer of the Board of Medical Examiners.

† With deletions and revisions made by the Department of Public Relations of the California Medical Association. For comment on some of these proposed laws, see editorial department of this issue.

**Professional and Vocational Standards* — See Department of.

Psychiatric.
A. B. 1487, Cronin—act to establish Psychiatric Institute.
S. B. 552, Fellom—adding Section 366*h* and 366*m* to Political Code, re State Psychiatrist.

**Poison Act*—See Pharmacy.
S. B. 611, Bush, Allen et al.—amending Section 6, Poison Act.

Pure Drug Act—See Drugs . . . Pharmacy.
A. B. 1342, Williamson—amending Sections 6, 9, 10, 11, 12, 13, 14, 15, 16 and 20, relating to mislabeled drugs and the powers of the Board of Health.

**Radiologists.*
A. B. 795, Craig—act to license operators of roentgen ray apparatus.

Rehabilitation.
A. B. 83, Jones—repealing act re rehabilitation of workmen disabled in industry.

Sanitation—See Department of Public Health.

**State Hospitals.*
A. B. 1740, Maloney—chiropractors to be admitted and superintendents removed who discriminate against them.
A. B. 2246, Robinson—Spadra Hospital to be used for care of feeble-minded.

Sterilization.
A. B. 211—providing for sterilization of select individuals for the protection of such individuals, the state, and future generations.
A. B. 564, Fisher and Zion—an act to provide for sterilization of state defectives.
A. B. 565, Fisher and Zion—an act to provide for voluntary sterilization of persons not in state institutions.

Tuberculosis—See Board of Health.
A. B. 273, Mayo and Clowdsley—amending Section 3 of Bureau of Tuberculosis Act, re management of hospitals.
A. B. 593, Boyle—amending Section 3 and 4 of Bureau of Tuberculosis Act.
A. B. 1848, Frazier—adding Section 3*a* to act, re Bureau of Tuberculosis.
A. B. 1848, Frazier—repealing act establishing preventorium.
S. B. 478, Bush—amending Section 3 of Tuberculosis Act.

Witnesses—Medical.
A. B. 986, Crist—an act to provide for selection of impartial medical witnesses.
A. B. 987, Crist—adding new section to Civil Code, re expert medical testimony and examination.

Workmen's Compensation.
A. B. 19, Meehan—amendment re amount of compensation payable.
A. B. 651, Mayo—amends Section 3, relating to terms and definitions.
A. B. 652, Mayo—adds Section 29½, relating to misrepresentation in obtaining awards.
A. B. 900, Rawls—amending Section 9, relating to compensation.
A. B. 902, Mayo—amending Section 38 and 47 of Workmen's Compensation Insurance Act.
A. B. 903, Mayo—adding Section 37*a* to Workmen's Compensation Insurance Act.
A. B. 1027, Mayo—amending Section 20 of Workmen's Compensation Insurance Act.
A. B. 1029, Mayo—amending Section 16 of Workmen's Compensation Insurance Act.
A. B. 1168, Morgan—amending Section 3 of Workmen's Compensation Insurance Act.

**X-ray.* See Roentgenologists.

Addenda.
*S. B. 160, Seawall—unlawful for hospital associations to operate except under Insurance Commissioner. (Important.)
A. B. 1020, Hunt—amending Section 594 of the Political Code, relating to kinds of insurance and insurance companies.
A. B. 1727, Jones—re support of indigents.

NEWS

Coming Meetings—

American Medical Association, Milwaukee, Wisconsin, June 12-16, 1933, Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

California Medical Association, Del Monte, April 24-27, 1933, Emma W. Pope, M. D., 450 Sutter Street, San Francisco, Secretary.

California Tuberculosis Association, Coronado, March 10-11, 1933, William C. Voorsanger, 582 Market Street, San Francisco, President.

Pan-American Medical Association, Dallas, Texas, March 21-25, 1933, Ralph Soto-Hall, 350 Post Street, San Francisco, Secretary.

Medical Broadcasts—

American Medical Association Health Talks.— The American Medical Association broadcasts on Monday and Wednesday from 9:45 to 9:50 a. m. (central standard time) over station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk sponsored by the association on Saturday morning from 9:45 to 10 over station WBBM.

* * *

San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KFRC, 4 to 4:15 p. m., and over station KJBS from 11:15 to 11:30 a. m.

* * *

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of March is as follows:

Tuesday, March 7—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Release from Worry.

Tuesday, March 14—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Problems of Nutrition.

Tuesday, March 21—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: What About the Heart?

Tuesday, March 28—KFI, 10:15 to 10:30 a. m., and KECA, 9:45 to 10 a. m. Subject: Convulsions in Infancy.

Typhus Quest Fatal to Doctor.—Dr. Augustin Duran, technician at the Biological Institute in Santiago, Chile, died of typhus on February 16, having contracted an infection during experiments with vaccines for use in treatment of the disease.

American College of Surgeons Meeting.—A sectional meeting of the American College of Surgeons for the states of Arizona and New Mexico will be held at Phoenix, on March 27 and 28. The following is a list of the visiting speakers:

Franklin H. Martin, M. D., Chicago, director general of the American College of Surgeons.

J. Bentley Squier, M. D., New York, professor of urology, Columbia University College of Physicians and Surgeons, and president of the American College of Surgeons.

William D. Haggard, M. D., Nashville, professor of clinical surgery, Vanderbilt University School of Medicine, and president-elect of the American College of Surgeons.

Charles H. Mayo, M. D., Rochester, Minnesota, professor of surgery, University of Minnesota Medical School and Graduate School, Mayo Foundation, and regent of the American College of Surgeons.

Clarence Cook Little, M. D., New York, managing director of the American Society for the Control of Cancer.

William V. Mullin, M. D., Cleveland, otolaryngologist, Cleveland, Ohio.

Alfred W. Adson, M. D., Rochester, Minnesota, professor of neurosurgery, Mayo Foundation.

Robert Jolly, M. D., Houston, superintendent of Memorial Hospital.

Bowman C. Cromwell, M. D., Chicago, associate director of the American College of Surgeons and director of clinical research.

Malcolm T. MacEachern, M. D., Chicago, associate director of the American College of Surgeons and director of hospital activities.

George Crile, M. D., Cleveland.

The tentative program follows:

MONDAY, APRIL 3

8:00-9:00 a.m.—Registration, Loung Room, Biltmore Hotel.
9:00-12:00 noon—Clinics at local hospitals.
10:00-12:00 noon—Hospital Conference, St. Vincent's Hospital Library Room. (Possibly may be held at hotel, but not definitely decided as yet.)
12:30-2:00 p.m.—Medical motion pictures, Music Room.
2:30-5:00 p.m.—Hospital Conference, Music Room.
5:00-5:30 p.m.—Annual meeting of Fellows.
8:00-10:30 p.m.—Scientific Session, Ballroom (General Surgery).
8:00-10:30 p.m.—Scientific Session, Conference Room (EENT).

TUESDAY, APRIL 4

9:00-12:00 noon—Clinics at local hospitals.
9:00-12:00 noon—Hospital Conference, Cedars of Lebanon Hospital Auditorium, Lebanon Hall.
12:30-2:00 p.m.—Medical motion pictures, Music Room.
2:30-5:00 p.m.—Scientific Session, Music Room (General Surgery).
2:30-5:00 p.m.—Scientific Session, Conference Room (EENT).
2:00-5:00 p.m.—Hospital Conference, Good Samaritan Hospital Nurses' Classroom.
8:00-10:00 p.m.—Community Health Meeting, Sala de Oro, Los Angeles Biltmore Hotel. (In case of overflow meeting, ballroom may also be utilized). Headquarters: Hotel Biltmore.

The committees in charge of the meeting are:

Executive Committee—C. G. Toland, M. D., F. A. C. S., chairman; George H. Kress, M. D., F. A. C. S., vice-chairman, and publicity; Harlan Shoemaker, M. D., F. A. C. S., finance; C. Hiram Weaver, M. D., F. A. C. S., secretary (address, 1709 West Eighth Street, Los Angeles).

Hospital Clinics Committee—Anders Peterson, M. D., F. A. C. S., California Lutheran; Maurice Kahn, M. D., F. A. C. S., Cedars of Lebanon; Guy Cochran, M. D., F. A. C. S., Children's; Simon Jesberg, M. D., Eye and Ear; Edward Ruth, M. D., F. A. C. S., Hollywood; Rea Smith, M. D., F. A. C. S., Good Samaritan; Harold Barnard, M. D., F. A. C. S., Orthopedic; E. W. Tice, M. D., F. A. C. S., Methodist; Thomas McHugh, M. D., F. A. C. S., Queen of Angels; Wayland A. Morrison, M. D., F. A. C. S., Santa Fe; Frank Breslin, M. D., F. A. C. S., St. Vincent's; George Thomason, M. D., F. A. C. S., White Memorial.

County Medical Society—Charles T. Sturgeon, M. D., F. A. C. S., president of the Los Angeles Medical Association; Harry H. Wilson, M. D., secretary of the Los Angeles County Medical Association, speaking engagements.

California Medical Charity Ruling by Attorney-General Webb.—An Associated Press news dispatch of February 16 states:

"Attorney-General U. S. Webb informed Dr. Giles S. Porter, Director of Public Health at Los Angeles, that Los Angeles County may not receive money from a person legally liable for the support of an indigent and thereafter divert that money to other purposes.

"Doctor Porter had asked concerning husbands of patients at Olive View Sanatorium who were able to pay five or ten dollars a month toward the care of their wives at the sanatorium. He asked whether acceptance of such would prevent the county from receiving the usual three dollars per week from the state for care of indigents, and if it could be accepted whether it was legal to take the money from the husbands and put it in a special fund to be used for the convalescent care of women.

"Webb ruled the county by accepting the small payments from the husband, even though not totaling three dollars per week, would prevent their acceptance of the fee from the state.

Western Hospital Association Meeting.—The Western Hospital Association, representing the interests of the twelve hundred hospitals in the eleven western states, presented its program for its 1933 One Hundred Per Cent Economic Convention in the Municipal Auditorium at Long Beach, February 22 to 25 inclusive. The program was especially designed to deal with the many economic problems which have been presented for the immediate consideration of the medical profession and hospitals. . . . This symposium on "Inevitable Changes in the Hospital World" sounded the keynote of the activities of the convention and presented features of special interest to all those associated with rendering hospital or medical service. George F. Stephens, M. D., president of the American Hospital Association, B. W. Black, M. D., president of the Western Hospital Association, J. L. Pomeroy, M. D., Los Angeles County Health Officer, Robert E. Warner, Spokane, Bishop W. W. Rawson, Ogden, Utah, and C. Rufus Rorem, M. D., of Chicago, spoke at the Wednesday morning session. . . . Friday's program was sponsored jointly by members of the California Medical Society and the Western Hospital Association. This session was devoted to discussion on the points presented in the "Report of the Committee on the Costs of Medical Care" and its many ramifications of suggestions for periodic payment plans for hospital and medical service for persons of limited means.

International Medical Postgraduate Courses in Berlin.—These are arranged with the help of the medical faculty of the university by the Lecturers' Association for medical continuation courses and the Kaiserin Friedrich-Haus. The information bureau of the Kaiserin Friedrich-Haus, Berlin NW 7, Robert Koch-Platz 7, gives information on all questions relating to the courses for the year 1933.

Pan-American Medical Association.—(News Dispatch)—Men who have made medical history, including most of the leaders of the profession in the Western Hemisphere, will attend the Pan-American Medical Congress which will be held in Dallas March 20 to 25, Dr. John O. McReynolds, president of the congress, said. An attendance of more than two thousand is being provided for and quarters are being obtained for several trainloads of scientific, educational and commercial exhibits.

While several general sessions will be held, most of the work of the congress will be carried on at sectional meetings. There will be thirteen sections, each with a president, several vice-presidents and a secretary and a Spanish committee.

Among the more important names found in the lists of section officers are that of the president emeritus of the School of Medicine, Johns Hopkins University; Dr. Charles H. Mayo, who among other titles, holds that of surgeon and associate chief of staff of the Mayo Clinic; Dr. William M. Haggard, president-elect of the American College of Surgeons; Surgeon-General Hugh S. Cumming, United States Public Health Service; Major General Robert U. Patterson, Surgeon-General, United States Army, and Rear Admiral Charles S. Riggs, Surgeon General Medical Corps, United States Navy. The names of the Spanish-speaking officials, while less generally known in the United States, are none the less important in the profession.

Every South American nation is represented in addition to the United States and Canada.

Recognizing the siesta custom of the Spanish-speaking countries, time has been allowed on the programs for the afternoon nap. Round-table luncheons will be arranged daily. For each section a committee has been organized to give special attention to the recreation of the visitors.

Final Report of the Commission on Medical Education.—Willard C. Rappleye, M. D., director of study, announces that additional requests have made it necessary to have more copies printed. These may be secured from the Columbia University Press, New York City, at a price of $2 a copy.

Reading References for the Study of the Economic Aspects of Medical Care.—The uncertain and uneven costs of sickness, the effect of high costs upon some families each year, the unsatisfactory incomes of physicians, the shortage of physicians and hospitals in many rural areas and other problems connected with the care and prevention of disease gave rise to widespread discussion, even during the years of prosperity. . . . Inquiries concerning the literature or other matters connected with the subject may be addressed to the Julius Rosenwald Fund, 4901 Ellis Avenue, Chicago.

Mental Hygiene of Unemployment.—The National Committee for Mental Hygiene, 450 Seventh Avenue, New York, has issued a booklet under the above title. It deals with how people react to deprivation and frustration; what is meant by emotional as against economic insecurity; the nature of the mental hygiene problem created by the depression; the character of some of the more common mental mechanisms back of apathy, resignation, aggression, panic, defeatism, despondency, credulity, antisocial behavior and other attitudes and emotional manifestations of the depression; ways and means by which problems of mental health can be constructively managed; what communities can do and are doing in meeting the mental and emotional needs of the unemployed; suggestions as to how the distraught can be helped to a healthier adjustment.

Cancer Commission Program for Del Monte Meeting. *Microscopic Pathology Conference.*—On Sunday, April 23 (immediately before the California Medical Association convention at Del Monte), two conferences will be held at the Del Monte Hotel from 10 a. m. to 5 p. m. One will be a microscopic pathology demonstration similar to the one conducted at Los Angeles in 1932. The following program is planned:

MORNING

10:00-11:00 a. m.—Connective Tissue Tumors, George D. Maner, Los Angeles.

11:00-11:20 a. m.—Case, Lawrence Parsons, Los Angeles.

11:20 a. m.-12:20 p. m.—Endothelioma, David A. Wood, San Francisco.

12:20-12:40 p. m.—Case, A. M. Moody, San Francisco.

12:40-1:00 p. m.—Case, G. Y. Rusk, San Francisco.

AFTERNOON

2:00-2:40 p.m.—Gastro-Intestinal Tract, Stomach. C. E. Nixon, Fresno.

2:40 3:00 p. m.—Case, Fred Proescher, San Jose.

3:00-3:40 p.m.—Gastro-Intestinal Tract, Colon. J. B. McNaught, Los Angeles.

3:40-4:00 p.m.—Case, Robert A. Glenn, Oakland.

4:00-5:00 p.m.—Kidney Tumors, E. H. Ruediger, H. A. Ball, San Diego.

Case histories, x-rays, etc., will be briefly presented by each demonstrator. Each member in attendance will then be given a microscopic slide from which to make a diagnosis, after which the case will be briefly discussed by the demonstrator. It will be necessary to limit the number in attendance to space available for microscope use; and any members desiring to attend should register promptly with the secretary of the Cancer Commission, 450 Sutter Street, San Francisco.

Inasmuch as the demonstration will be held at Del Monte, it will be necessary for each member attending to bring his own microscope. Please do not reserve a place unless you expect to be present, both morning and afternoon.

X-Ray Demonstration.—The second will be a similar demonstration on x-ray diagnosis of cancer, and will also run from 10 a. m. to 5 p. m., the following program being planned:

MORNING

10:00-11:00 a. m.—Stomach Cases, Milton J. Geyman, Santa Barbara.

11:00-12:00 noon—Colon Cases, L. H. Garland, San Francisco; A. C. Siefert, Oakland.

AFTERNOON

2:00-3:00 p.m.—Chest Cases, R. G. Taylor, Frank S. Dolley, Los Angeles.

3:00-3:40 p. m.—Brain Cases, O. W. Jones, Jr., Robert S. Stone, San Francisco.

3:40 5:00 p. m.—Bone Cases, L. C. Kinney, San Diego; Henry Snure, Los Angeles; I. S. Ingber, R. R. Newell, San Francisco.

It will be necessary also to limit the attendance at this conference, in order to allow individual study of films. Those desiring to attend should register with the secretary of the Cancer Commission.

Sunday Evening Program.—On Sunday evening, following these two conferences, a program sponsored by the Cancer Commission and the Woman's Auxiliary will be held at the Del Monte Hotel. The meeting will be open to the public. Announcement of details of the program will appear in the April number of CALIFORNIA AND WESTERN MEDICINE.

California Medical History Seminar.—The California Medical History Seminar recently gave a luncheon in honor of Dr. George Sarton at the Bohemian Club, San Francisco. Doctor Sarton is editor of Isis, historian of science and at present Hitchcock lecturer at the University of California. Doctor Sarton talked on "The Slowness of Human Progress" and there was a discussion on "California's First Real Great Scientist." There was an exhibit commemorating the centennial of the publication of William Beaumont's *Experiments and Observations on the Gastric Juice, and the Physiology of Digestion,* Plattsburg, New York, 1933.

MEDICO LEGAL

Compensation of Physicians and Hospitals: Right to Limit Liability After Express Promise to Pay*

The occupants of an automobile were injured in a collision with a motor bus owned by the defendant. The driver of the bus took them to a hospital owned by the plaintiff physician and directed that necessary treatment and hospitalization be rendered at the defendant's expense. Two days later an investigator for the defendant's insurer determined that the defendant was not legally liable for the injury caused by the collision. Apparently, at the requests of this investigator, the defendant wrote the plaintiff that he would not be responsible for payment for further services. The plaintiff, however, completed the necessary treatment and hospitalization and sued the defendant for the total amount due. Judgment was given in his favor and the defendant appealed to the court of civil appeals of Texas, El Paso. The defendant assigned as error the refusal of the trial court to continue the trial in order to enable him to produce the insurance investigator as a witness. This refusal, the defendant contended, affected him adversely, because the investigator would have testified on behalf of the defendant, that two days after the accident he undertook to limit the contract between the plaintiff and the defendant so as to relieve the defendant from liability for future charges. But, said the court of civil appeals, without the plaintiff's assent the defendant could not limit the liability imposed by the original contract. As was said by the Supreme Court of Minnesota in *St. Barnabas Hospital* v. *Minneapolis,* 68 Minn. 254, 70 N. W. 1126:

> The plaintiff, having taken in a helpless and severely injured man at the defendant's request, and upon its promise to pay for an indefinite time, it would be monstrous if the defendant could, the very next day, summarily withdraw its promise, leave the sick man on plaintiff's hands, and put it to the alternative of either keeping and caring for him without pay, or else cruelly and inhumanly throwing him into the street.

Since the defendant could not limit his liability under the contract, the proposed testimony of the insurance investigator was irrelevant and the trial court committed no error in refusing to continue the trial. The judgment in favor of the plaintiff was affirmed.—*Page* v. *Thomas (Texas), 47 S. W. (2d) 894. Journal of the American Medical Association.*

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* In some California cities and towns located near crossing highways, auto accidents are not infrequent. Small community hospitals have suffered heavy losses through persons and patients asking and receiving emergency and follow-up treatment and then departing without payment of bills.

CORRESPONDENCE

Subject of the Following Letter: Assembly Bill 795, Providing for a State Bureau of Roentgonology

To the Editor:—On behalf of the Radiological Section of the County Society, I desire to call your attention to Assembly Bill No. 795, introduced by Mr. Craig on January 23, 1933, and referred to the Committee on Medical and Dental Laws.

This is an Act which, after defining "roentgen rays," "roentgenologist," "roentgenograph," "roentgen machine," "roentgenologist's license," "roentgen machine license," "director" and "person," provides that no one shall maintain, operate or direct the use of any x-ray machine unless he holds a license under the provisions of this Act.

It also prohibits the installation, maintenance, or operation of any x-ray machine unless the machine has been authorized, inspected, and licensed.

It further provides that a roentgenologist's license shall be obtained by written or oral examination and that a fee shall be charged therefor.

It purports to set up safety standards.

It creates a new bureau or division in the Department of Professional and Vocational Standards and permits the director of said Department to appoint and fix the salary of a chief of such division or group.

It further permits the chief of such bureau to hire inspectors, clerks, and other employees.

It provides for the revocation of the license issued under this bill without the benefit of a hearing and on two days' notice.

It makes the violation of the provisions of this Act a misdemeanor.

It is probable that the idea behind this Act has merit. As it stands, however, the bill seems unnecessary and a further encroachment upon medical practice by non-medical persons, since, so far as I can make out, it elevates to the dignity of roentgenologist every person who secures such a license from the state. This undoubtedly paves the way for x-ray therapy by laymen and for admission as expert testimony of the evidence of laymen, cultists, etc.

The Radiological Section of the Los Angeles County Medical Association feels that such a bill should be killed. If there is a genuine desire to pass a bill to set up safety standards and to require some training on the part of technicians, I am sure that the Radiological Section of either the County or the State Medical Society would be glad to coöperate in the preparation of such a bill and to furnish its author with safety recommendations which are reasonable and efficient. We object very strongly, however, to legislation which will serve only to strengthen the position of non-medical persons in a medical field, to hamper those already licensed by the state to practice medicine in all its branches, to permit unqualified persons to give expert testimony, and to place such arbitrary powers in the hands of a bureau chief.

We would also remind you that this is not a bill affecting only roentgenologists, but it affects every man who owns, operates, or has operated for him an x-ray machine, and hence is a matter affecting a very large section of the medical profession.

Very truly yours,

LOWELL S. GOIN, M. D.

* * *

Further comments on Assembly Bill 795:

(Title of bill)—

An Act to provide for licensing and regulation of apparatus capable of producing roentgen rays or roentgenographs, and the licensing and regulation of operators of such apparatus, and to provide penalties for the violations hereof.

Section I: Line 2. Interpreted strictly, this definition to the remainder of the bill would prohibit the use of the radio, the definition being entirely incorrect.

Section I: Line 5. The word "roentgenologist" has a standard and accepted meaning, namely, a doctor of medicine especially trained in the use of roentgen rays for the diagnosis and treatment of human disease. Roentgenologists object very strongly to the assumption of this title by nonmedical persons. Radiographer would be a proper word to use in this connection.

Section I: Page 2, line 1. This section appears to specifically except doctors of medicine from the provisions of this Act, but,

Section III: Page 2, line 14, appears not to exempt doctors of medicine from the provisions of this section.

Section V: Page 2, line 33. The nature of the examination proposed is very vaguely defined, and apparently it is left almost entirely to the discretion of the director how serious such an examination shall be.

Section VI: Page 2, line 50 and following. There is no indication as to what shall constitute the standards of safety, although these have been carefully prescribed by various bodies. That part of this section (page 3, line 5) which appears to prescribe some protection is entirely unsuitable and shows no comprehension of what such protection should be.

Section XI: Page 3, line 46 and following. This seems extremely dangerous to the doctor of medicine who is a roentgenologist and is included under the provisions of this act, since this section provides that the director may revoke a license without a hearing on two days' notice, it being elsewhere provided that the operation of an x-ray machine without a license shall be a misdemeanor. It is probable that this is unconstitutional, since the principles of American law require that no man be deprived of his possessions or personal freedom without some sort of trial.

Subject of This Letter: Methylene Blue as Antidote for Cyanide Poisoning.*

To the Editor:—In the correspondence about "Methylene Blue as Antidote for Cyanide and Carbon Monoxide Poisoning" (*The Journal*, January 7, p. 59), my knowledge of the possible usefulness of methylene blue in the treatment of cyanide poisoning and my service to the San Francisco Department of Public Health have been referred to.

The use of methylene blue (methylthionine chloride, U. S. P.) in the treatment of cyanide poisoning is not original with Mrs. Brooks. . . . Following each demonstration, questions on the possible usefulness of the dye in clinical cases of poisoning have been asked by our students and colleagues, and the reply has been that it could be tried, without thoughts of originality or priority claims on our part. However, I know of no one besides Dr. J. C. Geiger who has actually made the clinical trial, which he did in accordance with directions in an outline for treatment of poisoning cases prepared by me for his use. The case of cyanide poisoning in which Doctor Geiger tried methylene blue was reported in *The Journal*, December 3, 1932, page 1944, and he drew attention to previously published work on the effects of methylene blue on cyanide poisoning. . . .

I made a survey of the treatment of poisoning cases in the six emergency hospitals of San Francisco, at the request of Doctor Geiger, April 22, 1932, and made an outline of directions for the treatment of poisoning, not only from cyanide but from many other drugs as well. In making this outline I drew freely on the "Hospital Practice for Interns," published by the American Medical Association, and also on Brundage's Toxicology and other sources, and on my own

* Reprinted in part from the Journal of the American Medical Association, February 4, 1933, because of its local and general interest to the medical profession of California.

experience. Full credit to the American Medical Association and to Brundage has been given in the outline of directions now used in the emergency hospitals here. The American Medical Association handbook referred to does not include cyanide, but this poison, together with methylene blue and some other antidotes, was included in the outline submitted to Doctor Geiger.

A consideration of all the facts indicates that the publicity in the lay press and the annoyance over credit which have followed the use of methylene blue in a case of cyanide poisoning in which mixed treatment was used have been uncalled for, regardless of the scientific merits of the case.

P. J. HANZLIK, M. D., San Francisco.
Professor of Pharmacology,
Stanford University School of Medicine.

Subject of Following Letter: A Communication Sent Out by the American Medical Association Council on Medical Education and Hospitals.

To the Editor:—The following communication has been sent to superintendents of hospitals registered by the American Medical Association.

* * *

There is being widely distributed an announcement of the Illinois College of Physicians and Surgeons, 20 North Ashland Boulevard, Chicago, which includes the following statement:

"Courses offered and requirements for graduation are class 'A' requirements."

Inasmuch as the Council on Medical Education and Hospitals of the American Medical Association is the only body which has ever rated medical schools as class A, it is clearly implied that the above-named school conforms to the standards prescribed by this Council. Such an inference, however, is wholly unwarranted. The above institution is conducted by a group of chiropractors and does not even remotely approach the standards of a class A medical school.

You are apprized of these facts in order that you may not unwittingly employ as interns any of the graduates of this school.

Very truly yours,

WILLIAM D. CUTTER.

February, 1933.

HOSPITALS DEEMED ESSENTIAL FOR SCIENTIFIC PROGRESS

Responsibility of the medical profession for the prevention of mental diseases was stressed by Dr. Ray Lyman Wilbur, Secretary of the Interior, in an address at the opening session of the twenty-ninth annual Congress on Medical Education and Licensure today.

The main topic of the first day's sessions was the recognition of the evolution of medical practice into special fields, and the problem of how to protect the public against self-styled specialists who have not adequate training. This again was held to be the job of the medical profession, with the aid of state boards. That this age of specialists is only a transition period that will merge into a period of better prepared general practitioners was the suggestion of Dr. Irving S. Cutter, dean of Northwestern University Medical School.

"The nation-wide hospital mechanism has been badly shocked by the depression," said Doctor Wilbur, who presided at the meeting. "New methods will be required so that hospitals may not only continue as educational institutions and a home for research, but also as a place where the highest possible medical skill can be universally available.

"In the field of mental diseases we face the necessity of accepting the care of mental cases as a responsibility of the whole profession. Better training of every medical student in this field is required. For decades we have gone on viewing mental disease largely from its fully established mental states and terminal stages, rather than from the standpoint of prevention and early recognition. As a profession we must meet the problem of mental hygiene of the insane and replace the policemen and the courts in the initial handling of those with disordered minds."

The council on medical education and its staff have been engaged on this problem during the year, he reported, and also have prepared and published lists of positions specializing in radiology and pathology.

"We are prepared to extend this to other special fields," he said, "to the end that members of the profession and others may be able readily to distinguish those who have received training in various branches from those who are merely self-constituted specialists.

"Within the last five years there has been a larger number of technically qualified applicants than the medical schools of this country have been able to receive. Some of those rejected and others not qualified have migrated to European universities with the expectation of returning to this country to practice. At the present time there are probably two thousand such American medical students abroad. To deal with this problem the council has brought together representatives of various bodies to discuss ways and means of protecting this country from men and women not fully prepared. It is hoped to have uniform action from state boards to exclude from the licensing examinations all who have not fully met the prevailing standard of medical education in this country.

"The breadth of medical knowledge is so great that no man can encompass it all. Only by the development of the hospital and its relationship to the sick has it been possible for scientific medical work to be done, and only by dividing up medical work of the hospital has medical responsibility to the community been met. Specialism is the inevitable accompaniment of the advance of modern science. In the United States it has developed practically free from control. The abuses current in uncontrolled medical education of three or four decades ago are now showing themselves in nearly all specialties.

"In the process of changing and maturing medicine the American Medical Association has had a dominating influence. It is now time for the council to provide certain minimum standards of education and training for specialists listed in the American Medical Association directory. Inspectors of the council are in the field and in a position to make personal investigations."—Los Angeles *Times*, February 14, 1933.

THE JAFFA FOOD BUDGET *

A Minimum Dietary for Health and Efficiency

The introduction to the tables in "The Jaffa Food Budget" follows:

The following extracts from "Food Standards" and other articles written by Prof. Myer E. Jaffa may help to explain the construction of the budget and facilitate the work of using it.

The frequent changes in the prices of food renders it impossible to make any constant allowance for food, either in the family budget or the budgets of relief organizations. The amount of increase needed, or

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* Published by the California State Department of Public Health. Compiled with the assistance of Adele S. Jaffa, M. D. For copies of complete budget, with food prices, etc., address Dr. W. H. Kellogg, California State Department of Public Health, Sacramento.

Approximate Amounts of Staple Foods for Different Ages

Food Classes	Oz. Per Day							Lbs. Per Week						
	Adults		Children					Adults		Children				
Class I	Man	Woman	15 Yrs.	11 Yrs.	7 Yrs.	4 Yrs.	2 Yrs.	Man	Woman	15 Yrs.	11 Yrs.	7 Yrs.	4 Yrs.	2 Yrs.
Meat and Fish	7.0	5.0	5.0	3.0	1.50	.75	*	3.00	2.20	2.20	1.31	.66	.33	*
Eggs	1.0	1.0	1.0	1.0	1.50	2.0	2.0	.44	.44	.44	.44	.66	.88	.88
Milk	7.0	12.0	16.0	16.0	20.00	26.0	32.0	3.00	5.25	7.0	7.0	8.75	11.37	14
Beans	1.0	.50	.50	.25	.12	.....	.....	.44	.22	.22	.11	.05	.....	.....
Class II														
Bread	16.0	9.0	11.0	8.0	5.0	3.5	1.5	7.00	3.94	4.81	3.5	2.20	1.53	.66
Other Cereals	5.0	4.0	4.0	3.0	2.5	2.0	1.5	2.20	1.75	1.75	1.31	1.1	.88	.66
Class III														
Fruit	8.0	5.0	8.0	5.0	5.0	4.0	*3.0	3.5	2.20	3.5	2.20	2.20	1.75	.13
Vegetables	16.0	12.0	12.0	10.0	8.0	5.0	2.0	7.0	5.25	5.25	4.40	3.5	2.20	.87
Class IV														
Oil	1.0	.75	.50	.25	1.2	.06	.....	.44	.33	.22	.11	.05	.03	
Butter	1.0	.75	1.0	1.0	.75	.75	.50	.44	.33	.44	.44	.33	.33	.22
Class V														
Sugar	3.0	2.0	2.25	1.5	1.25	1.0	1.0	1.33	.88	.98	.66	.55	.44	.33
Extras														
Tea and Coffee	.7	.7						.31	.31					
Sundries	?	?	?	?	?	?	?	?	?	?	?	?	?	?

* The fruit quantity is large because only the juice or finer pulp is used. If meat is given at 2 years, it may replace an egg on alternate days. If given as an extra, allowance must be made in the budget.

Vegetables include potatoes, which are estimated at 50 per cent of the total.

Sundries include materials for seasoning and flavoring the food, for "made dishes" and to give variety—salt, mustard, vanilla, yeast, cornstarch, sago, gelatin, cocoa, syrup, cheese, etc. These are added to the total cost but are not included in the list of staples as they do not all contribute to the nutritive value, and vary largely with different families. An average allowance is made for them in calculating the total calories.

The common measure of the listed foods can be judged by the following: One cup of milk, 8 ozs.; one egg weighs about 2 ozs.; one medium sized chop, 4 ozs.; a medium-sized apple or orange, 5 ozs.; one serving of potatoes or vegetables, 6 ozs. (as purchased); one serving butter, .5 oz.; one slice bread, 1 oz.

The food need of an adolescent is greatly in excess of what the age and weight seem to call for and what is allowed in the above table. An increase of 50 per cent is not unusual.

Heavy work calls for 25 per cent more food than does moderate work. Very heavy work calls for 50 per cent more food than does moderate work. Very large people require 25 per cent more food than those of average size. Very small people require 20 per cent less food than those of average size. Tall, thin people require more food than those of average build. Stout people require less food than those of average build.

The tuberculous, convalescents, and those who have been undernourished require a generous increase in food, especially of milk and eggs. * . . . (Then follow seven pages of California food costs.)

the decrease which may be justified, cannot be estimated by averaging the percentage of change in all food prices. Many expensive foods are not used by persons of small incomes, and therefore do not affect the budget. Even a very large increase in price for foods which are used rarely or in small quantities (cheese, beans, cocoa), affects the budget but little as compared with a small increase for those staple foods which are used continually or in large amounts (bread, milk, vegetables). This throws the problem of money allowance back to the problem of a food allowance as the only permanent basis for calculation. . . .

Quantity of Food.—The dietaries here presented call for only that amount of food which investigation has shown to be actually used by the body in the processes of living and of working. No allowance is made for a safety factor, for heavy work, invalidism, etc. They are, therefore, a minimum for health and efficiency, and are suited only to the "average person"—one who stands near the center of his group in age, weight, height; activity, rate of growth, temperament; health, and efficiency of his "working machinery." Food needs which deviate from the average must be considered with each individual case. . . .

Kinds of Food.—The staple foods which form a standard dietary are chosen from five classes or groups, which are all-important to the basic needs of the body and which, combined in proper proportion, form a "balanced diet." (1) The ***protein*** group furnishes most largely the material for growth and repair of body tissues. (2) The ***starchy*** group yield heat and energy for maintaining life and performing work, and gives bulk to the diet. (3) ***Fruits and vegetables*** supply base-forming elements which modify the effect of the acid-forming elements and help the body to maintain its mineral balance; they have hygienic properties, give bulk, and furnish heat and energy. (4) ***Fats*** are a concentrated source of heat, yielding two and one-quarter times as much per pound as starches. (5) ***Sugar*** is readily converted into energy. Vitamins and minerals, which are so essential to growth and to health, are furnished by foods of the first four classes. Some are well distributed and others limited to certain foods. . . .

Substitution of one type of food for another cannot be made in a minimum dietary without danger of decreasing its nutritive or hygienic values. A variety of fruits may be used and a variety of vegetables; starchy foods according to preference, more rice or cereal or macaroni; but starches cannot be substituted for fresh vegetables without detriment. The reverse substitution is safer, if it is remembered that beyond the point of hygienic need of the body, fruits and vegetables are a more expensive source of energy, yielding a much smaller number of calories per pound. Protein foods of vegetable origin (dried beans, peas, etc.) do not contain all the elements necessary for tissue building and are not adequate substitutes for animal protein. Fats of animal origin, butter and egg yolk, are the best sources of fat soluble vitamin, while vegetable oils have very little and do not replace butter. It is worse than poor economy to supply expensive material for growth and then limit the supply of vitamins that promote growth.

Occasional substitutions are most valuable for giving variety and can be used legitimately if credited to the proper classes and differences in food values are allowed for. Examples: Peanut butter (usually considered a "meat substitute") should be credited only one-quarter to meat, one-quarter to starch, and one-half to oil (not butter); bacon, one-third to meat and two-thirds to oil; jam one-half to fruit and one-half to sugar. One pound of canned fish equals one pound of meat; one pound of cheese equals six pints of milk for calories, but not for vitamin or mineral value; one pound of cereal equals five pounds of potatoes for calories, but the mineral ash and vitamins are different. One pound of dried prunes equals three and one-half pounds of fresh prunes or six pounds of fresh apples or peaches.

TOOTH CONSERVATION

Strong teeth are dependent to a large extent on a good diet. From the third month of prenatal life until about the eighteenth year the body is building teeth, and whether or not there is available material is dependent on food. Common sense and the careful avoidance of food fads through all these years is the best guide. With a mixed diet, which includes an adequate supply of the standard foods, such as white bread, potatoes and meats, with daily additions of those foods particularly rich in elements necessary for the teeth—milks, fruits, and green vegetables—good tooth material is assured.

Even though the teeth are built of the right material, a certain amount of exercise is required for their proper development. When about a year old, the baby can be given a piece of hard toast to chew each day. This demands mastication and will help the teeth push their way through the gum, at the same time giving the child the habit of chewing. In chewing, the supply of blood is stimulated and the gum tissue which supports the teeth grows strong and healthy. The vigorous and constant use of the teeth should become habitual.

Food that calls for grinding, tearing, and gnawing should be included in the daily diet, thus making the teeth do the work for which they were intended. Hard toast, raw fruit, celery, radishes, nuts, and such foods are valuable for this purpose.

Teeth may be constructed of fine material and may be faithfully exercised, but in addition to this, daily care to protect them from food particles that remain hidden in the mouth is essential.

The familiar saying that "a clean tooth never decays" is not an exaggeration, provided this cleanliness means not only the removal of food left about the teeth but also that the ever-present transparent coat of acid-making bacteria is taken off all tooth surfaces.

To remove the bacteria more than a casual and careless brushing of the teeth is required. Patients who boast of regular habits of brushing, frequently have to be convinced of this fact, and are amazed when the application of a solution that discolors living bacteria shows that their teeth are anything but clean in this respect. However, bacteria can be removed by brushing, if it is done in the proper way morning and evening. One good method is to place a dry toothbrush on the teeth, curving toward the gums so that the side leans against them and the ends reach between the teeth, and touch the surfaces close to the gums, which are frequently missed in the usual rotary method. In this position the brush should be moved almost in place with firm, short motions, exerting as much pressure of the arm and hand as possible. Care should be taken not to injure the gums. There are specially shaped brushes which are helpful in cleaning the backs of the teeth and other surfaces difficult to reach with the ordinary brush.

Rolls of dry cotton rubbed over the teeth are an excellent method of removing bacteria from all the surface that can be washed in this way. An instrument called the kurosis, which holds the cotton rolls firmly in place while the teeth and gums are rubbed and massaged, can be procured and will be a great help when this method of cleaning is used. Dental napkins may also be purchased in quantity and used similarly.

Another thing which I strongly recommend is the regular use of toothpicks. After each meal the teeth should be thoroughly gone over with a toothpick wrapped with cotton, if the teeth are far enough apart. If the teeth are crowded the cotton may be eliminated.

Any tooth moderately free from bacteria cannot decay. Such freedom can only be procured by intelligent, painstaking care every day. Brushing the teeth, rubbing with cotton rolls or cloth, and the use of toothpicks serve to prevent decay, just in proportion to the thoroughness and regularity with which the ever present acid-producing bacteria are removed from all tooth surfaces.

The baby's first teeth should be washed after each meal with a small brush or with dental napkins. When

able to handle a toothbrush, the child should be started on the habit of brushing the teeth in the proper manner after each meal. The repetition of brushing and rubbing is valuable not only for removing the food and bacteria accumulated around the teeth, but also for stimulating the circulation of the gum tissues, thus making them firmer and healthier.

In addition to all of this home care of the teeth, careful watching by a competent dentist is required from the start. The baby's first visit to the dentist should take place as soon as the primary teeth have all appeared. This examination will reveal any fissures or tiny imperfections which may have occurred in the enamel in the development of the teeth, and prompt treatment will prevent decay. Many parents look on the "baby" or temporary teeth as unimportant. Loss of these first teeth too early in life interferes with the proper development of the jaw, and is often the cause of irregular teeth. For this reason they should be treated with as great care as those that come later.

Calling for specially close watching are the six-year molars, the first permanent teeth, which erupt when the child is between five and seven. These may be located by counting from the front to the sixth on each side. Upon these teeth, sometimes called the keystone of the dental arch, depend to a great extent the regularity of the permanent teeth.

From the first visit to the dentist at about the age of two, dental examinations of the teeth should be repeated every six months. This is the most economical procedure in the long run, because it insures the discovery of imperfections when they are slight and can be readily and inexpensively corrected.—T. B. Hartzell, M. D., D. M. D., in *Everybody's Health.*

CALIFORNIA MUSSELS

As a further means of protecting the public from epidemics of shellfish poisoning such as those of 1927 and 1932, the Hooper Foundation of the University of California is advocating the use of bicarbonate of soda in cooking mussels, and the removal of intestines and careful washing of clams before use.

It is pointed out that one hundred persons were poisoned by mussels gathered during the summer of 1927 along the coast in the vicinity of San Francisco Bay. Tests by Hooper Foundation research men showed that the shellfish are most toxic during a limited period of the summer, and since that time a quarantine has been established for that period. Later experience revealed that clams and other shellfish develop the same poison. In 1932, despite quarantines and published warnings, an additional forty-two persons were poisoned from mussels and clams.

Because of this situation Dr. H. Muller, instructor in research medicine at the University of California, has just reported to the California Department of Public Health as follows: "Recent experiments have shown that there is a rather simple method by which mussels may be made safer to eat. The addition of one-quarter ounce, one tablespoonful of bicarbonate of soda to each quart of water in which the shellfish are soaked destroys 85 per cent of the poison when the cooking process is continued for twenty or thirty minutes. Steaming, cooking or baking without soda does not lessen the danger of poisoning. As a matter of fact the water in which shellfish may be cooked takes up the major part of the poison, and when this water is used the danger of poisoning is increased. It is also a mistake to believe that the blackening of a silver coin can be used as an indicator of the presence of poison."

Concerning clams, Doctor Muller says: "In both clams and mussels the poison is confined almost entirely to the intestines of the bivalve, and since these organs are larger in clams they are usually discarded. Some individuals use the whole clam in making chowder. Under such conditions the danger is just as great as is that in poisonous mussels. If the intestines were always removed from clams the danger of contracting poisoning from this shellfish would be lessened greatly."

In concluding his report to the health department, Doctor Muller added; "Mussels and clams are valuable foods, especially to persons who live along the coast. There should be no fear in the eating of these shellfish, provided that the general public is well informed relative to certain dangers connected with them at certain seasons of the year. A more widespread campaign of education should be undertaken not only in newspapers but by means of outdoor signs, pamphlets, cookbooks, public school instruction, and by means of other avenues of public information. Everyone who uses shellfish should know how to prepare them properly for eating by use of bicarbonate of soda in the case of mussels and discarding of the intestines and thorough washing in the case of clams. Furthermore, the public should always respect a quarantine measure which may be established, with full assurance that it is a necessity for the protection of human life. If these procedures were followed consistently the danger of shellfish poisoning on the Pacific Coast could be greatly reduced, if not entirely eliminated."

SURGICAL TREATMENT OF FACIAL PARALYSIS

Announcement of an improved method in the surgical treatment of facial paralysis, an affliction which, impairing facial control, has long challenged the attention and sympathy of the medical profession here and abroad, is made in an article in the current issue of the quarterly bulletin of the Milbank Memorial Fund. . . . Complete control of facial expression, one of mankind's most prized possessions, has been restored to patients whose faces paralysis had robbed of expressive, mobile qualities. This is accomplished through direct repair of the injured nerve by an autoplastic graft, writes Dr. Arthur B. Duel, author of the article. . . . It is Doctor Duel's opinion that the restoration of facial movements is not only a great boon to a patient's morale in his social contacts, but is also of tremendous importance in making him self-supporting. . . . "If I were asked to name one human feature which more than any other seemed to me to reveal the character of an individual," Doctor Duel declares, "I am sure that I should say 'facial expression!' . . . The trite saying, 'The face is the mirror of the soul,' is undoubtedly well founded. . . . Small wonder then that a malady which impairs or destroys this play of expression so manifest in every individual has always engaged the attention and sympathy of the medical profession." . . . Working first with animals, Doctor Duel and his collaborator finally demonstrated that by direct repair of the injured nerve by grafts, emotional response, as well as voluntary control, of the facial muscles could be achieved. This represents a marked advance over previous methods which at their best never permitted emotional expression. The principles which had been evolved by the animal experiments are now being successfully used on humans. Doctor Duel has now successfully operated on seventeen humans who are in varying stages of recovery. Photographs of four patients show the degree of success with which the improved method of treatment was carried out. Reproductions of well-known pictures, including drawings by Sir Charles Bell, from whom more than a century ago the term, "Bell's Palsy" was derived, show typical expressions of such emotions as fear, serenity, jealousy, et ceterra. . . . The research work which led up to the gratifying improvement in results of this surgical treatment described by Doctor Duel, was made possible by contributions from the Milbank Memorial Fund, the Carnegie Corporation, the Lillia Babbitt Hyde Foundation, the New York Foundation, and a number of the author's personal friends.*

* Copies of the reprint of this article will be supplied by the Milbank Memorial Fund, 40 Wall Street, New York, upon request.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VI, No. 3, March, 1908

From some editorial notes:

Pure Milk.—Will we ever have a reasonably pure milk supply? Is it another case of commercial activity versus the survival of the fittest and human inertia? Time will show. Certainly the active work of the Pure Food Commission of the state society is doing something to improve conditions in some parts of the state—notably in the south—and the more recent activity of the California Club and County Medical Society in San Francisco seems to promise some improvement in that section in the future. . . .

One Board or Three?—It is by no means the intention of the journal to enter into a controversy with our osteopathic friends as to the relative merits of regular medicine, osteopathy or any other form or manner of attempting to alleviate the sick or distressed. The old question of one examining board or many is, however, brought up and a few words on the subject may not be amiss. . .

Business Methods.—Systematic work and careful, exact business methods are not in the slightest degree incompatible with professionalism in its most refined form. Rather is the contrary true. The man who thoroughly systematizes his work, who is niggardly of his time, who arranges his schedule of appointments carefully and sees to it that his most valuable possession—his time—is not stolen by inconsiderate patients, finds himself able to do more things, to read more, to study more and to play more, than the man without system in his work, who finds the day gone, his energies dissipated, with many things left undone and with no inclination to study or play. . . .

San Francisco and the Plague Situation.—A careful survey of the situation in San Francisco presents to the observer certain facts and conditions the knowledge of which comes with a distinct shock. The present campaign may be divided into two clearly marked objectives. The first, of course, is the killing off of rats, and in the prosecution of this work we note that the city is spending some $12,000, the Federal Government some $40,000 monthly; to this amount is to be added a sum obtained by subscription from citizens which is now being collected, and will closely approximate a half million of dollars. . . .

From an article on "The Awakening of Public Interest in Sanitation" by William Freeman Snow, A. M., M. D., Associate Professor of Hygiene, Leland Stanford Junior University.

Hygiene and sanitation are as yet vague terms in the vocabulary of the public, but they are terms which are used with rapidly increasing frequency. The logical development of these terms will restrict hygiene to the individual and sanitation to his surroundings. . . .

From an article on "A Plea for United States Army Contract Surgeons" by H. du R. Phelan, M. D., San Francisco.

The untimely death of Major Carroll of the Medical Department of the Army brings out the fact that it was as a contract surgeon that he earned at the cost of his health and of his life the title of "Benefactor of Humanity," by the discovery of the agent of transmission of yellow fever.

From an article on "Crimes? or Maladies!" by Antrim Edgar Osborne, M.D., Santa Clara.

It is not necessary to be very observant to notice, in visiting public penal and charitable institutions, the strong similarity which exists among their inmates. True, some are being punished for crimes, while others are being cared for because of their mental and physical weakness; and yet in institutions, apparently as wide apart as a reform school and a home for feebleminded, you will see the same cast of features and very many of the same physical characteristics. . . .

From some county society reports:

Alameda County.—The society was called to order by President E. M. Keys, owing to the absence of Past President Dr. Daniel Crosby. . . .

The paper of the evening was presented by Dr. O. D. Hamlin, under the title of "Surgical Suggestions and Observations." Preparatory treatment is an important feature in all operative work. The condition of the kidneys and gastro-intestinal tract is most important. The majority of surgical work is not emergency, and the condition of the patient will often prove more serious than the operation. . . .

Sonoma County.—Dr. George H. Evans gave us a talk on the plague in San Francisco. He thought that Sonoma County should take measures to prevent the plague from her territory. He said that one-half per cent of rats were infected in September in San Francisco, and that the percentage had increased till January gave two per cent. . . .

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

By GILES S. PORTER, M. D.
Director

California Public Health in 1870.—The committee on hospitals of the California Legislature of 1870 reported out favorably a bill which provided for the organization of the California State Board of Health. The attitude of the members of the senate committee is indicated in the report which accompanied the recommendation and which reads, in part, as follows:

"We believe that whatever relates to life and the promotion of health is of paramount importance to the human family and that a community ignorant of properly collected facts concerning its vital history is culpably neglectful and but feebly defended against the 'pestilence that walketh in darkness and destroyeth at noonday.' This belief is strengthened by what is now continually afforded in the happy results of domestic and civic hygiene, wherever practiced, urged by the progressive minds of the medical profession. . . . We confidently believe that whatever will tend to enlarge our knowledge, not only of preventive diseases but also of the lengthening out of human life, will most surely subserve the best interests of the people, and must prove of vast benefit to the state from an economical point of view. Knowledge is what is wanted, to be diffused and spread broadcast over the land, to be brought within the reach of all classes, and especially workingmen. Every day of sickness, whether produced from any one of the thousand circumstances intimately connected with the several trades and vocations, insalubrity of the workshop, the city, village, or domicile, or by accident, is indeed so much cash capital deducted from the fund upon which they and their families can alone depend for support. Yet it is frequently the case that we overlook every principle of hygiene and therefore regularly pay the penalty imposed by the moloch of preventable disease, as is demonstrated in the crowded condition of county hospitals and lunatic asylums.

Not humanity, merely, but a wise policy, therefore, unite in calling upon us to do all that can be done to foster and promote sanitary investigations.

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

They belong to the patriot no less than the philanthropist. They involve future prosperity and national greatness. The mischief done by disease is not to be measured by the number of deaths. That is the least part of the result. The paralyzing influence upon emigration, and the natural increase of population, is sufficiently disastrous; but the real and lasting injury lies in the deterioration of race, in the seeds of disease transmitted to future generations, in the degeneracy and decay which are seldom detected till the evil is irreparable."

List of Diseases Reportable by Law—

Anthrax
Beri-beri
Botulism
Chickenpox
Cholera, Asiatic
Coccidioidal granuloma
Dengue
Diphtheria
Dysentery (amebic)
Dysentery (bacillary)
Encephalitis (epidemic)
Erysipelas
Flukes
Food poisoning
German measles
Glanders
Gonococcus infection*
Hookworm
Influenza
Jaundice (infectious)
Leprosy
Malaria
Measles
Meningitis (meningococcic)
Meningitis (cerebrospinal)
Mumps
Ophthalmia neonatorum
Paratyphoid fever
Pellagra
Plague
Pneumonia (lobar)
Psittacosis
Rabies (animal)
Rabies (human)
Relapsing fever
Rocky Mountain spotted (or tick) fever
Scarlet fever
Septic sore throat (epidemic)
Smallpox
Syphilis*
Tetanus
Trachoma
Trichinosis
Tuberculosis
Tularemia
Typhoid fever
Typhus fever
Undulant (Malta) fever
Whooping cough
Yellow fever

Quarantinable Diseases—

Cerebrospinal meningitis (epidemic)
Cholera Asiatic
Diphtheria
Encephalitis (epidemic)
Leprosy
Plague
Poliomyelitis
Scarlet fever
Smallpox
Typhoid fever
Typhus fever
Yellow fever

Raw Milk Versus Heated Milk.—In severeal California communities recently, considerable attention has been drawn to local ordinances which would require that all milk be pasteurized unless produced under the supervision of medical milk commissions. The need for the pasteurization of general milk supplies has been recognized so generally that there is little room for argument against the general policy of pasteurization.

The United States Public Health Service, Washington, D. C., has recently produced a bulletin entitled, "Do Children Who Drink Raw Milk Thrive Better Than Children Who Drink Heated Milk?" a copy of which is sent on application. The bulletin contains a report of a survey of 3,700 children in the states of Alabama, Mississippi, Florida, Georgia, North Carolina, Kentucky, Texas, Missouri, Oregon, and Washington. The detailed information as obtained from mothers of children relative to diet, health histories, and the heights and weights of the children as determined by actual measurements at the time of this survey were tabulated and studied. The ages of the children ranged from ten months to six years. The final conclusion of this survey is that the growth-promoting capacity of heated milk plus the supplementary diet received by the average American child of ten months to six years is not measurably less than the growth-promoting capacity of raw milk plus the supplementary diet received by the average American child of ten months to six years. . . .

* Reported by office number. Name and address not required.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M.D.
Secretary-Treasurer

State Board Examiners 1933 Report.—The January, 1933, report rendered to His Excellency, Governor James Rolph, Jr., by the California Department of Professional and Vocational Standards, referring to the Board of Medical Examiners, states that the efforts of said board have "proven an effective barrier in curbing the activities of medical fakers and untrained and incompetent practitioners, who prey upon the gullible public, reaping a big harvest and at the same time leaving a trail of suffering and misery in their wake. The operations of this board have been highly successful not only in curbing the medical racketeers, but in keeping the standards of the medical profession upon a high plane. As a result of the vigilance and untiring efforts of the members and representatives of the board, many of these racketeers are now serving prison terms in California, while countless others have fled to other states to evade prosecution. However, the chief accomplishment in this regard has been to prevent many of this type of swindlers from other states coming to California. Outstanding among the swindlers whose operations have been curbed by the board in the last year have been the eyesight racketeers, whose promise of restoring vision has netted them in excess of $30,000. Operations of peddlers who dispose of fake radium drops and inexpensive electric belts for fabulous sums have also been curbed and fake cancer cures exposed. Investigations by the board also disclosed that many hospital executives were negligent in checking the credentials of self-styled doctors whom they employed, thus resulting in several cases of fakers being given responsible positions in these institutions. In addition the board has continued to vigilantly guard against renewal of operations of fake medical schools and diploma mills and recently exposed one of these institutions in San Francisco. A study of the operations of the board for the past year would indicate that the supply of fakers, like the supply of victims, is endless. New crops appear as fast as the old one is harvested or as quickly as one group of racketeers are imprisoned or forced to leave the state. Hundreds of persons are bilked out of their last dollar by charlatans and sometimes this represents the savings of a lifetime. . . . "

The following bulletin was received from the Council on Medical Education and Hospitals of the American Medical Association:

"There is being widely distributed an announcement of the Illinois College of Physicians and Surgeons, 20 North Ashland Boulevard, Chicago, which includes the following statement:

" 'Courses offered and requirements for graduation are class 'A' requirements.'

"Inasmuch as the Council on Medical Education and Hospitals of the American Medical Association is the only body which has ever rated medical schools as class A, it is clearly implied that the above named school conforms to the standards prescribed by this Council. Such an inference, however, is wholly unwarranted. The above institution is conducted by a group of chiropractors and does not even remotely approach the standards of a class A medical school.

"You are apprized of these facts in order that you may be able intelligently to advise those of your students who may be about to choose medicine as a career."

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

"Dr. John H. Graves, president of the State Board of Public Health, yesterday was appointed medical director of the State Industrial Accident Commission and State Compensation Insurance Fund" (San Francisco *Examiner,* February 3, 1933).

According to reports, Charles F. Aycock, sentenced in the United States District Court of Los Angeles on Tuesday, April 5, 1932, to a term of eighteen months in the United States penitentiary, McNeil Island, Washington, has lost his appeal. Aycock is said to have formerly operated the Aycock Medical Institute, Los Angeles, and extensively advertised Aycock's Tuberclecide. (Previous entries, June, 1928; April, 1929; January, 1931.)

Reports relate that on February 7, 1932, in the San Francisco Municipal Court, H. K. Dombalian pleaded guilty to a violation of the Medical Practice Act and was given a thirty-day sentence, suspended on condition that he no further violate the Medical Practice Act. He is said to be a student in a local Naturopathic School.

Reports relate that Jeannette Gray was on January 12 found guilty in the courts of Los Angeles of violation of the Medical Practice Act and sentenced to pay a fine of $50 or serve twenty-five days in the city jail, sentence being suspended for six months.

Volume 85, No. 4429, California Decisions, published February 9, 1933, under the heading of "Minutes," shows "Howson vs. Board of Medical Examiners: By the Court—Appellant's petition to have the above entitled cause heard and determined by this Court after judgment in the District Court of Appeals of the First Appellate District, Division 1, is denied." This decision finally disposes of Doctor Howson's appeal from the judgment of the board rendered July 8, 1931, suspending his license to practice in this state for a period of one year. (Previous entry, July, 1931.)

S. B. Hunnerwell was reported to have been found guilty of violation of the Medical Practice Act in Los Angeles, February 1, 1932, and sentenced to pay a fine of $100 or serve fifty days in the city jail. Sentence was suspended.

Mrs. Ann Johnson on January 24 pleaded guilty in the courts of Los Angeles to a charge of violation of the Medical Practice Act and was sentenced to serve sixty days in the county jail, sentence being suspended.

Reports relate that Maurice S. Kellogg was on January 24 found guilty in the courts of Los Angeles of violation of the Medical Practice Act and committed to jail. It is also reported that two counts of possession of fictitious narcotic prescriptions were filed against him. He is said to have a previous narcotic record.

Reports relate that on January 31 J. E. Matson pleaded guilty in the courts of Los Angeles on a charge of violation of the Medical Practice Act and was sentenced to pay a fine of $100 and to serve sixty days in the city jail. Jail sentence suspended and fine paid.

Perchance other medical examining boards in the United States are not as careful as is California in checking up on the records of those seeking to practice, judging from the following article printed some time since in *Medical Economics:* "Possibly you can't fool all of the public all of the time, but here is the story of a layman who posed as a physician and fooled the public and part of the profession for seven years. During that time he

"Acted as assistant to a professor in a school of medicine; took a full-time position as physician with a Chicago health institute; opened an office in Chicago; was house physician in a department store; opened a sanitarium in Cleveland; took a medical post with the Pennsylvania Railroad, another with the Bethlehem Mines Hospital; won a commission in the Army Medical Reserve Corps; filled a vacancy in a United States Marine Hospital; was ship surgeon on a steamer; ended up as a physician in a school for the feeble-minded.

"The fraud was worked by taking the name of a real physician, and writing for a duplicate medical certificate. When a case puzzled him he called in a consultant.

"He is now held by Philadelphia police."

Reports relate that Richard J. Morrison, M. D., on January 24, 1933, in the Police Court of Santa Monica pleaded guilty to six counts of a narcotic charge and was sentenced to 180 days on each count, sentence being suspended and he being placed on probation for three years.

Frederick Flores, San Bernardino Junior College student, against whom a murder charge was dismissed Monday when a misdemeanor charge of violating the State Medical Practice Act was filed in Justice Court, was released on $500 bond yesterday. Flores had been held in the county jail since October 6, when Mrs. Cripano Ayala died at the county hospital, following an alleged illegal operation . . . " (San Bernardino *Telegram,* January 26, 1933).

Records show that on February 9 Eugene Rinaldo was found guilty in the courts of Los Angeles on a charge of violation of the Medical Practice Act and on February 16 was said to have been sentenced to pay a fine of $150 or in default to serve seventy-five days in the city jail. Defendant gave notice of appeal and appeal bond was fixed at $500. (Previous entries, September and December, 1928; February and September, 1929; September and December, 1930; June, 1931; July and December, 1932.)

On February 14 in the Justice Court of San Diego, F. A. Sagstetter, operating the "Triclast Clinic" in said city, pleaded guilty to a violation of the Medical Practice Act and was sentenced to pay a fine of $100, the fine being suspended on condition that he not again violate the provisions of the Medical Practice Act.

"Dr. John M. Carter, physician, 1055 Washington Street, was booked by federal agents at the city prison last night for violation of the Harrison Narcotic Act. They allege he has been illegally dispensing narcotics to patients" (San Francisco *Examiner,* February 9, 1933.)

"Investigation of witch-doctor complaints against Mrs. Anna Cerrito, 440 Ellsworth Street, spread yesterday to Oakland, Fresno, and Sacramento. Thousands of dollars were said to have been collected by the woman, who claimed to dispel 'evil spirits.' Further sensations in the case, revealed exclusively in the *Chronicle* Sunday, were expected, as Dr. C. B. Pinkham of the State Medical Board and Special Agent J. W. Davidson continued their inquiry. Mrs. Cerrito is out on bail, pending trial for practicing medicine without a license, after Mr. and Mrs. Joseph Calonico, 112 Winfield Street, reported they paid $688 for 'charms,' including old horseshoes guaranteed to 'drive out the devil,' bits of red flannel underwear cut in the shape of roses and similar material designed to cure their sick daughter. In the Oakland case Mrs. Cerrito is said to have received $5,000 for worthless bits of cast-off material, which her 'clients' were told would bring the sick child back to health" (San Francisco *Chronicle,* January 30, 1933).